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TRENDS IN PEDIATRICIAN PARTICIPATION IN STATE MEDICAID PROGRAMS

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CONTENTS

Executive Summary 1

Chapter 1 Medicaid Policy Changes and Their Impact on Physicians and Children..... 7

Introduction..... 7
Medicaid and the Access of Low Income Children to Health Care..... 8
The Role of the Pediatrician in the Access of Low Income Children to Health Care..... 11
Early Experiences of Physicians with State Medicaid Programs..... 11
Medicaid During the Late 1970s and Early 1980s..... 12
Summary..... 16
Notes..... 17

Chapter 2 Research Questions and Methods..... 21

Theoretical Framework..... 21
Hypotheses..... 27
Research Methods..... 33
Notes..... 41

Chapter 3 Nonparticipation and Participation in Medicaid..... 45

Introduction..... 45
Descriptive Statistics..... 45
Multivariate Analysis: 1978 and 1983..... 46
Panel Analysis..... 47
Discussion..... 50
Notes..... 64

Chapter 4 Extent of Medicaid Participation..... 65

Introduction..... 65
Descriptive Statistics..... 65
Multivariate Analysis: 1978 and 1983..... 66
Panel Analysis..... 68
Discussion..... 70
Notes..... 89

Chapter 5 Limited and Full Medicaid Participation..... 91

Introduction..... 91
The Sub-sample..... 91
Descriptive Statistics..... 92
Multivariate Analysis: 1978 and 1983..... 93
Comparing Extent of Participation for Limited and Full Participants..... 94
Panel Analysis..... 95
Discussion..... 98
Notes..... 116

Chapter 6 State Level Analysis of Physician Participation in Medicaid: 1978-1983..... 117

Introduction..... 117
California..... 122
Colorado..... 128
Georgia..... 134
Indiana..... 140
Iowa..... 145
Maryland..... 150
Massachusetts..... 155
Nebraska..... 160
New York..... 165
Oklahoma..... 171
Pennsylvania..... 176
Tennessee..... 182
Texas..... 187
Synthesis of Case Studies..... 192
Notes..... 195

Chapter 7 Findings and Implications..... 197

Introduction..... 197
Implementation of OBRA and TEFRA: A Review in Thirteen States..... 197
Changes in Pediatrician Participation in Medicaid: A Review of Descriptive Statistics in Thirteen States..... 200
Nonparticipation..... 201
Extent of Participation..... 202
Limited and Full Participation..... 203
Other Findings and Implications..... 205

References..... 207

Appendixes..... 213

A. Survey Instruments..... 213

1978..... 214
1983..... 237

B. An Analysis of Survey Ineligibility and Nonresponse..... 247

C. Technical Description of Variables in the Analysis..... 256

D. Weighting the 1983 Data..... 261

E. Summary Statistics for Multivariate Analyses..... 263

F. State Medicaid Programs..... 267

List of Figures

2.1 Theoretical framework of provider participation in public programs..... 39

4.1 Histogram of Extent of Participation, 1983..... 74
4.2 Frequency distribution of the change in the extent of Medicaid participation among participating pediatricians between 1978 and 1983..... 81

List of Tables in Text

2.1 Hypotheses..... 38
2.2 State sample..... 40

3.1 Participants and nonparticipants: group means..... 53
3.2 Discriminant analysis: participation and nonparticipation in 1978 and 1983..... 55
3.3 Changes in proportion of pediatricians participating in Medicaid between 1978 and 1983..... 56
3.4 Change in proportion of pediatricians participating in Medicaid between 1978 and 1983, by state..... 57
3.5 Change in the means of the characteristics of pediatricians who were Medicaid participants in 1978..... 58
3.6 Unweighted discriminant analysis of Medicaid participation in 1983, panel physicians..... 60
3.7 Change in the means of the characteristics of pediatricians who were Medicaid nonparticipants in 1978.. 61
3.8 Unweighted discriminant analysis of Medicaid participation in 1983, panel physicians..... 62

4.1 Extent of participation in Medicaid: previous studies..... 75
4.2 Correlates of extent of participation: Pearson correlation coefficients and p-values..... 77
4.3 Mean adjusted extent of participation by categorical variables..... 78
4.4 Regression analysis: Log of extent of participation in 1978 and 1983..... 79
4.5 Changes in the extent of Medicaid participation between 1978 and 1983..... 82
4.6 Proportion of Medicaid participants who increased, decreased, or maintained the same extent of participation between 1978 and 1983..... 83
4.7 Change in the average extent of participation among participating pediatricians by state, 1978 to 1983..... 84
4.8 Change in the extent of Medicaid participation between 1978 and 1983 for different categories of pediatricians..... 85
4.9 Zero-order correlations for characteristics of pediatricians and the change in the extent of Medicaid participation between 1978 and 1983..... 86
4.10 Unweighted standardized regression analysis of log of extent of participation in 1983 (EXTLOG83), panel physicians..... 87

5.1 Typology of pediatricians with respect to acceptance of Medicaid patients and all new non-Medicaid patients... 101
5.2 Full and limited participants: group means..... 102
5.3 Discriminant analysis: full and limited participation in 1978 and 1983..... 104
5.4 Average extent of Medicaid participation for full and limited participants, 1978 and 1983..... 105
5.5 Regression analysis of log of extent of participation for full and limited participants, 1983..... 106
5.6 Changes in the proportion of pediatricians participating fully in Medicaid between 1978 and 1983.... 107
5.7 Changes in the extent of Medicaid participation for full and limited participants between 1978 and 1983.. 108
5.8 Change in the proportion of pediatricians who are full participants in Medicaid between 1978 and 1983, by state..... 109
5.9 Change in the means of the characteristics of pediatricians who participated fully in 1978..... 110
5.10 Unweighted discriminant analysis of full and limited participation for panel members who were full participants in 1978 and either full or limited participants in 1983..... 112
5.11 Change in the means of the characteristics of pediatricians who limited their participation in 1978.... 113
5.12 Unweighted discriminant analysis of full and limited participation for panel members who were limited participants in 1983 and either full or limited participants in 1983..... 115

6.1 Proportion of pediatricians participating in Medicaid, 1978 and 1983 118
6.2 Average extent of participation among participants, 1978 and 1983 119
6.3 Proportion of pediatricians limiting participation, 1978 and 1983 120
6.4 State Medicaid program, California 123
6.5 Survey results, California 124
6.6 State Medicaid program, Colorado 129
6.7 Survey results, Colorado 130
6.8 State Medicaid program, Georgia 135
6.9 Survey results, Georgia 136
6.10 State Medicaid program, Indiana 141
6.11 Survey results, Indiana 142
6.12 State Medicaid program, Iowa 146
6.13 Survey results, Iowa 147
6.14 State Medicaid program, Maryland 151
6.15 Survey results, Maryland 152
6.16 State Medicaid program, Massachusetts 156
6.17 Survey results, Massachusetts 157
6.18 State Medicaid program, Nebraska 161
6.19 Survey results, Nebraska 162
6.20 State Medicaid program, New York 166
6.21 Survey results, New York 167
6.22 State Medicaid program, Oklahoma 172
6.23 Survey results, Oklahoma 173
6.24 State Medicaid program, Pennsylvania 177
6.25 Survey results, Pennsylvania 178
6.26 State Medicaid program, Tennessee 183
6.27 Survey results, Tennessee 184
6.28 State Medicaid program, Texas 188
6.29 Survey results, Texas 189

List of Tables in Appendixes

B.1 Reasons for survey ineligibility, by state, 1978 249
B.2 Response rates by state, 1978 250
B.3 Reasons for survey ineligibility by state for panel physicians, 1983 251
B.4 Reasons for survey ineligibility by state for sample physicians, 1983 252
B.5 Reasons for survey ineligibility, panel and sample physicians, 1983 253
B.6 Response rates by various physician characteristics and chi-square test of significance 254

C.1 Variables in the analysis 257
C.2 Components of the Revised Medicaid Program Index 260

D.1 Weights for 1983 data..... 262

E.1 Means and standard deviations, physicians in the participation analysis, 1978 and 1983..... 264
E.2 Means and standard deviations, physicians in the extent of participation analysis, 1978 and 1983..... 265
E.3 Means and standard deviations, physicians in the full and limited participation analysis, 1978 and 1983..... 266

EXECUTIVE SUMMARY

Research Objectives

The period 1978 through 1983 saw the passage of important federal Medicaid legislation, the Omnibus Budget Reconciliation Act of 1981 (OBRA) and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). The legislation sought to lower eligibility for Aid to Families with Dependent Children (AFDC) and to limit federal financial participation in Medicaid, while providing greater discretion to the states in setting their Medicaid policies. The legislation, along with recession and unemployment, put state budgets under great pressure and forced many states to look for new ways to contain Medicaid expenditures.

This study examines changes that occurred in 13 states in conjunction with the implementation of OBRA and TEFRA. The states are California, Colorado, Georgia, Indiana, Iowa, Maryland, Massachusetts, Nebraska, New York, Oklahoma, Pennsylvania, Tennessee, and Texas. The specific objectives are as follows:

- Describe the changes in Medicaid occurring in 13 states as a result of federal and state legislation and regulation during the period 1978 through 1983;
- Describe the changes occurring in pediatrician participation in 13 state Medicaid programs during the period 1978 through 1983;
- Examine changes in Medicaid participation and their associations with changes in Medicaid policy on a state by state basis, drawing policy relevant conclusions from these observations;
- Examine cross-sectional and longitudinal multivariate models of pediatrician participation in state Medicaid programs, with particular attention to the role of state Medicaid policies in influencing participation.

Methods

Data for this study are drawn primarily from physician surveys conducted in 13 states in 1978 and 1983. The states were selected in 1978 on the basis of their widely differing Medicaid policies. In each survey, approximately 800 office-based pediatricians were questioned concerning their Medicaid participation and other aspects of their medical practice. The pediatricians surveyed in 1983 included the panel of 814 pediatricians surveyed in 1978. A supplementary sample of pediatricians entering practice since 1978 was also included in the 1983 survey in order to ensure a sample representative of the 1983 age distribution of pediatricians. Data were also collected from a variety of secondary sources.

Findings

Implementation of OBRA and TEFRA in Thirteen States

A state-by-state analysis indicates that the 13 study states made unique responses to situations faced with OBRA and TEFRA. The states' political and economic realities led to highly individualized adaptations to conditions prevailing during this period. The following common themes emerge:

- Most of the thirteen states avoided making deep cuts in Medicaid eligibility during the 1978 to 1983 period. All made the mandated OBRA cuts in AFDC eligibility but, even with the new flexibility in Medicaid coverage granted by OBRA, few initiated eligibility cuts beyond those mandated.

- Very few states deleted categories of eligibles entirely and often those same categories were subsequently reinstated.

- Few states cut their covered services and, in fact, seven of the thirteen states added services.

- A much greater emphasis was placed by the states on utilization controls than had previously been the case.

- In many states we see innovative responses designed to gain control of rising program costs--particularly through expanded use of new reimbursement incentives.

- Changes also occurred in the management of state Medicaid programs, particularly in efforts to reduce eligibility errors, to control fraud and abuse, and to recover payments from other third parties sharing in the liability for a Medicaid eligible's medical costs.

- A few states substantially reduced reimbursement of Medicaid providers during this period. However, on the whole, the study states showed a preference for cutting and/or restructuring Medicaid reimbursement over major cuts in program eligibility or services.

The state-by-state analysis indicates that in coming years states will rely increasingly on cost containment through manipulating reimbursement incentives. This strategy has the potential to expand access by more efficiently deploying state Medicaid resources. However, this strategy may have unintended costs as well. In many states, recent reimbursement cuts have resulted in a decline in primary care providers' willingness to make office-based services available to Medicaid-eligible children. To the extent that these children continue to receive Medicaid services, it is likely to be in unnecessarily expensive sites of medical care such as hospital emergency rooms and outpatient clinics.

Changes in Participation in Medicaid: Descriptive Statistics

Pediatrician participation in Medicaid has been relatively stable between 1978 and 1983. Although there were many changes in state Medicaid policies, these were generally not significant enough to bring about major shifts in pediatricians' involvement with the program. Some downward trends are evident, particularly in the growing numbers of pediatricians limiting their Medicaid participation. However, with the exception of a few states, participation remained largely unchanged. Some findings are highlighted below.

The proportion of pediatricians participating in Medicaid changed only slightly, from 85 percent to 82 percent, a difference which is significant at the $p < .10$ level. Declines in Medicaid participation varied by state with Pennsylvania showing a decline in participation which was statistically significant.

Among physicians who participated in Medicaid, the average percent of patient load covered by Medicaid fell only slightly from 15.7 percent in 1978 to 14.7 percent in 1983. Although the states vary widely in the average extent of participation among pediatricians, in none of the states were there significant declines in this measure between 1978 and 1983.

There were notable increases in the proportion of physicians who, while accepting all new non-Medicaid patients, indicate that they are limiting their acceptance of Medicaid patients. The proportion who are such "limited participants" increased from 26 percent in 1978 to 35 percent in 1983, a difference significant at the $p < .01$ level. Once again, interstate variation is notable; California, Georgia, Nebraska, and Oklahoma showed significant increases in limited Medicaid participation between 1978 and 1983.

Nonparticipation

Although most pediatricians are participating in Medicaid, there is some reason to be concerned about observed declines between 1978 and 1983, especially in particular states. The 1983 multivariate analysis indicates that nonparticipants are older, less likely to be board-certified, and less liberal in their attitudes about the role of government in ensuring the poor's access to health care. In addition, they tend to practice in areas with more physicians.

In general, nonparticipants are found to be practicing in states with lower Medicaid reimbursement (relative to the physicians' fees), and in states with relatively less generous Medicaid policies, as measured by the Revised Medicaid Program Index (RMPI). The analysis suggests that raising reimbursement and expanding the generosity of state programs would foster a greater degree of participation among pediatricians.

There was a significant decline in participation in the panel between 1978 and 1983. Such changes in participation status, if they continued indefinitely, would result in 30 percent of the panel being nonparticipants. This is almost twice the amount of nonparticipation that was evident in the panel in 1978 when 86 percent of the panel pediatricians were found to be participants. We note, however, that the changes in participation status are

not distributed evenly across the states; Pennsylvania, California, and Colorado each had large net decreases in participation in the panel during this period.

Extent of Participation

Medicaid policies continue to influence extent of Medicaid participation. Positive economic incentives such as relatively higher reimbursement are associated with greater participation, as are the positive professional incentives represented by relatively higher RMPI scores. We note, however, that while significant in both years, the strength of the relationship between policies and participation has diminished in 1983.

The relationship between service area characteristics and participation, by comparison, is stronger in 1983 than in 1978. As would be predicted, physicians practicing in areas with relatively more Medicaid-eligibles are likely to have relatively more Medicaid patients. However, where the physician supply is the greatest (and, in particular, in metropolitan areas) pediatricians tend to have relatively fewer Medicaid patients. This finding, although not predicted by our theoretical framework, has been consistent in the literature for several years and requires further research.

The panel analysis provides additional insight into extent of Medicaid participation among pediatricians. We learn, for example, that 43 percent of the 412 panel members participating in both 1978 and 1983 decreased their Medicaid participation, on average from 19.4 to 11.2 percent. The largest decreases were observed in California and Oklahoma.

In addition, the panel analysis points to changes in several factors between 1978 and 1983 which were associated with changes in participation. Pediatricians least likely to have decreased their Medicaid participation between 1978 and 1983 were pediatricians whose practice costs increased least during this period. Declining economic conditions (such as declining per capita income and increasing Medicaid population in the area of the medical practice) were also associated with being least likely to have decreased participation. Finally, pediatricians practicing in states where professional incentives improved, as measured by increases in the Revised Medicaid Program Index, were also least likely to have decreased their participation in the program. The findings of the panel analysis emphasize that changes in participation between 1978 and 1983 were a function of changes in demand from the Medicaid-eligible population, as well as changing economic and professional incentives created by state Medicaid policies.

Full and Limited Medicaid Participation

Limited Medicaid participation became somewhat more widespread among pediatricians between 1978 and 1983, changing in varying amounts among the states in our sample. These trends are of particular concern because of their implications for the access of low income children to pediatric care.

The 1983 replication of our 1978 model suggests that full Medicaid participation is largely a function of economic incentives facing the pediatrician. Foreign medical graduates, those with low practice overhead costs, and those in nonmetropolitan areas are all more likely to be full participants in 1983. And, in addition, those receiving a relatively higher Medicaid reimbursement relative to their usual fees are also more likely to be full participants in 1983.

The panel analysis provides additional insight into changes in full and limited participation made by pediatricians between 1978 and 1983. We note that physicians who had been full participants in 1978 and became limited participants in 1983 appear to be responding to the following specific changes: they were most likely to have had increases in practice overhead costs (making Medicaid participation less financially viable), to have moved into a metropolitan area (where limited participation is more prevalent), or to have had a decrease in the level of their Medicaid reimbursement (also making Medicaid participation less financially viable). These findings reinforce those of the replication: becoming a limited participant between 1978 and 1983 was a response to economic constraints which might, to some degree, be mitigated if more positive economic incentives were created by Medicaid policies.

Other Conclusions

Medicaid is in a dynamic policy environment and policy changes have important implications for both access and program costs. Future developments at the federal and state levels will, inevitably, affect physicians participating in the program. It is therefore important that Medicaid policymakers and administrators continue to monitor physician participation in Medicaid.

Recent Medicaid policies do not appear to have brought about dramatic declines in participation, although a few states have notable participation problems and the rise in limited participation is an unwelcome trend. However, despite the relative stability in participation, future policies altering Medicaid reimbursement will even more directly affect physicians than have Medicaid policy changes of the recent past. For this reason it is important to continue to monitor participation trends. It is also important that states avoid unduly adverse policies surrounding physicians' participation in Medicaid. If office-based physician participation in Medicaid can be fostered, children will neither have to use relatively more expensive sites of care (such as hospital outpatient departments and emergency rooms) nor, still worse, forego needed medical care.

This research also demonstrates the usefulness of multiple levels of analysis in studying federal-state programs such as Medicaid. Two units of analysis are employed: the individual physician and the state. This method of analysis recognizes the value of explanation occurring at both levels. When using the individual as the unit of analysis, one is able to provide a rigorous test of multivariate models of physician behavior (as in Chapters 3, 4 and 5). However, such analyses are of limited usefulness in developing state-specific policy recommendations for fostering Medicaid participation. Since Medicaid is a state program, and states retain discretion in policy decisions, it is also necessary to include quantitative and qualitative

empirical work using the state as the unit of analysis (as in Chapter 6). This methodological strategy recognizes that the interstate variation in Medicaid limits our ability to generalize from multivariate analyses of the behavior of physicians (in multiple states) to physicians in any particular state. Because of Medicaid's federal-state structure, the study of Medicaid program outcomes requires a multi-level approach in order to be most useful.

CHAPTER 1

Medicaid Policy Changes and Their Impact on Physicians and Children

Introduction

Through the enactment of Medicaid and other health programs of the 1960s access to health care for the poor was significantly improved. However, as the nation moved into the 1980s, the federal government began to reconsider its willingness and its capacity to finance health care for the poor. While access had been improved, the cost had been high. Public expenditures for medical care had increased dramatically in the past two decades from $10.8 billion in 1965 to $136.8 billion in 1982 [1]. Medicaid outlays had grown from $2.9 billion in 1967 to $32.4 billion in 1982 [2].

The Omnibus Budget Reconciliation Act of 1981 (OBRA) and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) are evidence that the federal government is rethinking its role in ensuring access to health care for the poor. The Medicaid legislation of the early 1980s did two things. First, it increased the fiscal pressure on state budgets by cutting back the federal match for Medicaid expenditures. Second, it presented the states with new policy options, particularly in areas of Medicaid cost containment. These developments were in keeping with the "New Federalism" espoused by the Reagan Administration which was to allow the needs, priorities, and resources of states and localities to guide policy to a greater extent than before. As a result of growing fiscal pressures and the new latitude provided to state Medicaid programs, it was expected that states would begin to initiate a variety of program changes in areas such as Medicaid eligibility, covered services, reimbursement and program administration.

Health care policymakers have for some time been aware that provider participation in state Medicaid programs is critical to their success. When physicians are unwilling to participate in state Medicaid programs, low-income patients must often seek their primary care from more expensive and sometimes less effective settings, such as hospital emergency rooms. Physician participation in state Medicaid programs is critical to both the access and the cost containment objectives of state Medicaid programs. Moreover, prior research has shown that physicians' Medicaid participation is influenced in part by state Medicaid policies. There is reason to believe, therefore, that recent Medicaid policy changes may have affected provider participation, with implications for both access to health care and program costs.

The overall objective of this research is to assess the impact of recent Medicaid legislative changes on the participation of pediatricians in state Medicaid programs. Our specific objectives can be stated as follows:

- to describe changes in Medicaid occurring as a result of federal and state legislation and regulation during the period 1978 through 1983;

- to describe changes occurring in pediatrician participation in state Medicaid programs during the period 1978 through 1983;

- to examine changes in Medicaid participation and their associations with changes in Medicaid policy on a state by state basis, drawing policy relevant conclusions from these observations;

- to examine cross-sectional and longitudinal multivariate models of factors associated with pediatrician participation in state Medicaid programs, with particular attention to the role of state Medicaid policies in influencing participation.

In this chapter we present the context for this research. First, we describe the current status of low income children's access to health care. Second, we describe the problem of pediatrician participation in state Medicaid programs and its relationship to the problem of access to health care. Finally, we provide a description of the recent federal Medicaid legislation, OBRA and TEFRA.

Medicaid and the Access of Low-Income Children to Health Care

Andersen's behavioral model of health services use suggests that a combination of predisposing factors, illness levels, and enabling factors determine service utilization [3]. Among the predisposing factors are social and demographic characteristics related to specific patterns of health services use. Illness levels, or need, both as perceived by the individual and as evaluated by a health professional, are also factors in service use. The enabling factors, which are of particular interest to us, are those conditions that permit the individual to use services. These include characteristics such as income level and health insurance status, and community characteristics, such as the availability of health service providers. A lack of financial resources and a provider's unwillingness to serve a Medicaid client are barriers to service use.

In contrast to many of the predisposing and need factors, those which enable people to use services are generally susceptible to policy intervention. For example, policies promoting income redistribution enhance the ability of families to purchase health services. Alternatively, government may reduce economic barriers to service use by financing services directly, as in the case of Medicaid.

Medicaid's role in financing the health care of low-income children is substantial, as recent data on national health expenditures confirm. Medicaid is the major third party payer for children; in 1978, it financed 15.8 percent of the $19.9 million spent on personal health care for those under 19 years of age [4]. National Medical Care Expenditure Survey data show that an estimated 31 percent of poor and near-poor children were covered by Medicaid throughout the survey year, while an additional 17 percent were covered by Medicaid during part of the year [5]. The most dramatic indication of the importance of the Medicaid program for children is the fact that in 1982, one child in seven received care financed by Medicaid [6].

Research indicates that Medicaid improved the access to health services for the low-income population, including children [7-17]. Health services utilization patterns of low-income persons and their higher-income counterparts have been converging since the mid-1960s, when Medicaid began to be implemented. Physician visits per capita is one commonly-used measure of access to health services which illustrates this trend. In 1967, persons of all ages with incomes under $5,000 had an average of 4.3 physician visits per capita per year, while those with incomes over $15,000 averaged 4.8 visits. By 1969, this positive association between income and physician visits had disappeared, and in 1975 the lowest income group averaged 6.0 visits, while the highest had 4.9 visits. While use by low-income persons of all ages exceeded that of higher-income groups in each year since 1968, it was not until 1975 that use by low-income children (under 17 years of age) exceeded that of higher-income children. In 1967, children in families with incomes under $5,000 had 2.7 physician visits per year, while those in families whose incomes exceeded $15,000 had 4.7 visits. In 1971, the figures were 3.8 visits and 5.0 visits. In 1975, physician visits per capita had increased in 4.6 for children in the lowest income group, and had actually declined to 4.5 for children in the highest income group [18].

The gains in access to health care experienced by low-income children in recent years have been substantial. As the following sections reveal, however, these trends in utilization obscure remaining differences among income groups, including their use relative to need, their access to a regular source of care, the settings in which their care is received, and the relative burden of out-of-pocket expenditures.

Use Relative to Need

While health service use rates among income groups are converging, such comparisons need to be adjusted for health status, since low-income children tend to be in poorer health than their higher income counterparts [7,9,13,15,18-21]. Research has shown that low-income children are more likely to have restricted activity days, days when they are confined to bed, and days out of school. Using Health Interview Survey data, Kovar estimates that relative to the number of days of disability, poor children had fewer physician contacts than children in higher-income families. Moreover, among children in good health with no disability limitation, low-income children were less likely to have had a check-up within an adequate interval [22].

Access to a Regular Source of Care

It is well-established that individuals with a regular source of care are more likely to visit a physician at least once during a given year than those with no regular source [23-25]. The evidence also suggests, however, that access to a regular source of care is not shared equally by subgroups of the population. For instance, in a recent survey, 88 percent of the children under 18 reported having a regular source of care, but black children and poor children were more likely than average to report having no regular source of care [9]. Similarly, a longitudinal study conducted in Michigan reported that although Medicaid children had more physician visits per year than non-Medicaid children, they were no more likely than low-income uninsured children

to report having a regular source of care [27]. Moreover, low-income and black children are less likely to receive preventive care [22,28-29].

Use of Health Care Settings

Most of the care received by children is ambulatory, but research suggests that children of different income levels are not equally likely to receive care in the same settings. In particular, poor children receive a greater proportion of their care in institutional settings such as hospital emergency departments, outpatient clinics, and neighborhood health centers [30-32]. Evidence suggests that these patterns of health service use remain despite the Medicaid program, which was intended to provide access to mainstream medical care.

For example, according to the Health Interview Survey, among children in families with incomes under $5,000, 63 percent saw a doctor during the year. Thirty percent received care in private offices; 14 percent in institutional settings; and 19 percent in both. By contrast, 74 percent of children in the higher income group saw a doctor during the year, with 54 percent receiving care in private settings, only 3 percent in institutional settings, and 17 percent in both. Similarly, black children, poor children, and children in central cities were more likely than average to rely on hospitals as their regular source of care and less likely than average to rely on private physicians [26].

While not necessarily of lower quality, the care delivered in these settings is likely to be more episodic and less comprehensive than care delivered in private offices. This evidence on use of different health care settings is consistent with studies cited above showing that low-income children are less likely to receive preventive care, and less likely to report having a regular source of care.

Out-of-Pocket Expenditures

There is evidence that in spite of public programs, the financial burden of medical care is not felt equally by families at different income levels. For instance, Andersen, Lion, and Anderson found that families with the lowest incomes spent 13 percent of their incomes for medical care, while those with the highest incomes spent only 3 percent [8].

Summary

In summary, while low-income children now experience greater access to health care than before, there is evidence that the distribution of health services is not yet equitable. In particular, while patterns of health services utilization by income group have converged, it is not clear that use is adequate relative to the greater need of low-income children, who tend to have poorer health status. In addition, low-income children are more likely to receive care in institutional settings, and less likely to receive regular care and preventive services. Despite the gains of the last twenty years, there is still a need to consider strategies for enhancing the access of low-income children to health care. Among those worth examining are means to

foster the potential service provider's willingness to treat Medicaid-eligible children and to bill the program for services rendered.

The Role of the Pediatrician in the Access of Low-income Children to Health Care

Published data include no direct estimates of the socioeconomic status of children visiting pediatricians. However, available data do show that, among physicians, the pediatrician is a major provider of health care to American children. For example, the 1975 National Ambulatory Medical Care Survey found that 29 percent of the office visits made by children (through age 21) were to pediatricians. Moreover, the pediatrician's role is particularly important for young children: over half of the visits of children under two years (57 percent) and from two to five years (51 percent) were to pediatricians, but the proportion fell to 32 percent for six to 14 year olds, and to only five percent for those 15 to 21 [33]. Since the pediatrician plays such a key role among physicians in the delivery of care to young children, the access of low-income children to mainstream care is very much the issue when we consider the factors influencing participation of pediatricians in Medicaid.

Early Experiences of Physicians with State Medicaid Programs

As early as 1966, Medicaid policymakers and administrators showed an awareness of the role of provider participation in the access of Medicaid eligibles to services. The early Handbook of Public Assistance Administration established a guideline that a minimum level of participation should be about two-thirds of the providers in the state [34]. These early regulations reflected the interest of program administrators in providing mainstream medical care to the low income population [35]. The proviso that two-thirds of the state's providers participate is an admittedly crude and arbitrary indicator of access to mainstream care. However, this regulation provided a guideline for assessing the adequacy of the level of provider participation and conveyed the intent of Medicaid.

The "two-thirds" regulation is not stipulated in current Medicaid regulations. In fact, current regulations do not include any such guide for evaluating the adequacy of provider participation levels. In addition, there are neither requirements for a state to report participation levels, nor penalties for low participation levels. As a result, data on provider participation in Medicaid are not available from federal sources and, until the mid-1970s, what was known about provider participation levels was based primarily on anecdote.

The literature on Medicaid's early years suggests an unwillingness of physicians to participate in the program [35,36]. One 1968 study identified 14 states reporting unwillingness of physicians or other providers to participate [37]. However, this early literature lacked data with which to document trends in participation.

A number of studies were undertaken in the mid-1970s to describe physician participation in Medicaid. These studies were primarily descriptive, enumerating the difficulties reported by physicians in serving

Medicaid patients [38-44]. These included inadequate reimbursement, delayed reimbursement, denied reimbursement, and unpredictable reimbursement. Physicians also cited complex forms and bureaucratic "red tape" as reasons for unwillingness to participate in Medicaid. Other problems included proliferating regulations and controls which physicians found interfered with patient care [39-43,45].

By the mid-1970s it was apparent that many factors influenced physician participation in Medicaid. Social scientists began to capture these complex relationships in multivariate models. Research of this type is described in greater detail in Chapter 2. In the process, it became apparent that Medicaid participation of physicians is, at least in part, a function of state Medicaid policies. These policies vary from state to state and, as a result, participation also varies. Moreover, these policies vary over time, resulting in changes in physician participation in state Medicaid programs. The changes occurring in conjunction with OBRA and TEFRA are an example of state policy changes likely to affect physicians' participation in state Medicaid programs. This question is taken up in more detail in subsequent chapters. We turn now to a more detailed description of the Medicaid legislative changes of the late 1970s and early 1980s, OBRA and TEFRA.

Medicaid During the Late 1970s and Early 1980s

OBRA and TEFRA are best understood in the context of the broader developments occurring in the late 1970s and early 1980s. These developments, enumerated by Altman, included the following: increasing fiscal pressure on federal and state budgets during a period of economic slowdown; increasing public concern about taxes, government spending, and the rising costs of health care; the Reagan administration's concept of a "New Federalism" that would substantially increase the role of state government in public policy; the change in government health care cost containment initiatives to include not only broad regulatory reform but also short-term budget reduction; and a growing willingness to treat health care like other goods to which classic market approaches such as price competition can be applied [46].

In the states, recession and high unemployment during this period served to increase state unemployment and welfare expenditures while reducing state revenues from sales, business, and income taxes. With state spending exceeding revenues in the late 1970s and early 1980s, and with Medicaid often comprising the single largest category of state expenditure, state efforts to contain Medicaid costs were necessarily well under way by the time OBRA and TEFRA were passed. Indeed, the federal legislation represented a mere intensification of state efforts, incorporating many recently adopted state initiatives [47].

The Omnibus Budget Reconciliation Act of 1981

In an effort to contain Medicaid spending, the Reagan Administration originally proposed a flat cap of 5 percent on the growth of the federal Medicaid share for 1982, in addition to providing the states with considerable flexibility in the implementation of cuts and restrictions. While the cap would have limited Medicaid expenditures at the federal level, it also would have shifted the entire burden of cost control to the states. State governors

argued vocally against this proposal on the grounds that it was unfair to require the states to bear the entire burden of national recession, unemployment, and the federal policies which were in part responsible for health care cost inflation. The original proposal was rejected by both the House and the Senate.

The House Energy and Commerce Committee, which considered the issue of reducing Medicaid payments to the states, suggested a different formula for reductions that would be less of a hardship for the states. It recommended federal share reductions of 3 percent in 1982, 2 percent in 1983, and 1 percent in 1984. The Committee reasoned that since Medicaid programs already overburdened many state budgets, states already faced strong incentives to contain costs. Moreover, it was inflation in health care costs which was largely at fault for the major increases in Medicaid expenditures. While the Committee reasoned that states should not be made to suffer further budget pressure due to factors beyond their control, the mood of the times demanded that federal spending be cut back and that Medicaid expenditures, along with other social welfare expenditures, would have to be reduced. The reduction proposed by the House Committee was explicitly temporary:

> This method of reduction provides an equitable and temporary way to spread the loss of Federal funding among the States, and...is clearly preferable to placing a 'cap' on the Federal contribution which would be arbitrary, inequitable, and a total change in the nature of the program [48].

The Act as passed reduced the federal match for Medicaid expenditures by 3 percent in 1982, 4 percent in 1983, and 4.5 percent in 1984. The reduction in federal financial participation could be offset by one percentage point for each of the following: 1) unemployment rates exceeding 150 percent of the national average; 2) recoveries from fraud and abuse detection and (in 1982 only) recoveries from third parties equal to 1 percent of federal payments; and 3) operation of a certified hospital cost review program. In addition, the reductions would be offset for each state that held increases in Medicaid spending to 9 percent of 1981 estimates in 1982, and thereafter to an amount equal to the medical care component of the Consumer Price Index.

OBRA included a variety of other changes in the area of Medicaid eligibility, covered services, and reimbursement. Those provisions which are particularly relevant to access and primary care physician participation in Medicaid are outlined briefly below.

Mandated Eligibility Cuts -- Under OBRA, new AFDC regulations reduced income disregards for work expenses and child care, enacted a cap on gross income of 150 percent of the need standard, and made other changes restricting AFDC eligibility. Nationally, OBRA reduced welfare rolls dramatically, with greater impact in some states than others [49]. Optional Medicaid eligibility categories, particularly medically needy programs, mitigated the effects of the AFDC cuts on state Medicaid caseloads. However, it is likely that Medicaid caseloads would have been much larger because of the recession were it not for the OBRA cuts.

Optional Eligibility Cuts -- Before OBRA, states were required to cover 18 to 20 year olds who would have been eligible for AFDC if they were in school. In addition they could provide optional coverage to financially

eligible children under 21, or reasonable classifications of such children (usually children for whom the state was assuming responsibility). OBRA required states to cover children only up to the age of 18; AFDC children or financially eligible children aged 18-20 might be covered at state option with the age limit set at 19, 20, or 21.

States with medically needy programs had previously been required to cover all SSI- and AFDC-related individuals who could spend down to the protected income level. OBRA allowed states to cover just some categories of the medically needy, with the stipulation that any medically needy program should provide ambulatory care to children and prenatal and delivery services to pregnant women. OBRA also permitted states to vary income and asset levels for different categories of the medically needy. Finally, the Act permitted states to exclude from Medicaid coverage people who had given away or sold assets for less than market value in the past two years in order to qualify for assistance.

Reductions in Covered Services -- OBRA permitted several significant changes in the amount, scope, and duration of covered Medicaid services. For example, prior to OBRA, states that chose to cover costs for their medically needy population were required either to pay for all of the seven basic Medicaid services [50] or a mix of seven out of seventeen possible services. OBRA allows the states much more flexibility in deciding what services to provide to the medically needy. States are no longer required to provide a minimum number of services, nor any specific mix of services. Also, the legislation allows states to cover some services for a particular age group and not for others. OBRA retains the requirement that state Medicaid programs pay for home health services for any medically needy individual who would otherwise be confined to a skilled nursing facility.

Other changes in the area of covered services were designed to give the states greater control over Medicaid service use. States were granted permission to lock in recipients who are deemed overutilizers (restricting their use to a particular provider); to lock out providers found to give excessive services or services of poor quality; to abandon Professional Standards Review Organization review of Medicaid services, or carry out its own program of review of hospital and long term care stays; to purchase laboratory services and medical equipment through competitive bidding arrangements; and to contract with health plans such as HMOs which provide services in addition to those provided by the regular state Medicaid plan to Medicaid recipients who enroll. In addition, the legislation granted waiver authority for several other Medicaid requirements:

1. to establish a primary care case management system or a similar arrangement with specialists;

2. to allow a locality to act as a broker in helping Medicaid recipients to choose among competing health plans;

3. to share with recipients cost savings realized from use of more efficient health services; and

4. to restrict recipients to providers who comply with reasonable state standards.

Regulations concerning prepayment were also relaxed: the maximum proportion of Medicaid and Medicare enrollees in an HMO was increased from 50 percent to 75 percent and states were permitted to guarantee up to six months of eligibility. In addition, states were permitted to enter into contracts with HMOs that are not federally qualified, as long as they meet specified criteria.

Finally, OBRA permitted waivers to the Medicaid law so that states could provide home- and community-based services for patients living at home instead of in nursing homes. Services that can be included in such Section 2176 waivers can include case management, homemaker services, home health aide services, personal care services, adult day care services, rehabilitation services, and respite care [51]. Previously, Medicaid reimbursement had been limited almost exclusively to medical services.

Changes in Medicaid Reimbursement -- Perhaps the most important OBRA changes were in the area of reimbursement for Medicaid services. Most significantly, OBRA eliminated the requirement that states reimburse hospitals on a reasonable cost basis. Reasonable cost reimbursement was rejected as inflationary; the new law permits hospitals to be reimbursed according to rates that are reasonable and adequate to meet the costs of efficiently and economically operated facilities meeting applicable laws and safety standards. The House had been particularly interested in prospective payment, and wanted to require that Medicaid adopt prospective payment for hospitals by 1984. Although this provision was not enacted, DHHS was directed to develop a model for prospective payment that could be used under Medicare and Medicaid in the future.

In addition to the above, OBRA removed the requirement that Medicaid payments to physicians not exceed the Medicare reasonable charge level. In other words, states are allowed under this provision to pay physicians more than was previously allowed. It also enables states to work out innovative payment schedules. This provision was primarily intended to facilitate state rate-setting for physicians' services. The House noted that some states with geographic differences in Medicare payments had to set their statewide Medicaid fee schedules at arbitrarily low rates in order to comply with the Medicare ceiling. The Committee argued that repeal of the ceiling would allow states to simplify administration of the program and to adopt fee schedules if they wish, without discouraging physician participation in the program [52]. The door was opened to greater innovation in physician reimbursement for Medicaid services.

Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA)

Several additional Medicaid changes relevant to physician participation in the program were introduced through TEFRA. First, the legislation expands state discretion in the use of cost sharing by authorizing states to impose nominal copayments on mandatory services (other than emergency services and family planning) for the categorically needy. All pregnant women, children under 21, persons in nursing homes, and HMO enrollees were exempt from cost sharing. The amendment was designed "...to allow states to deter unnecessary utilization while not imposing an unreasonable hardship on beneficiaries" [52].

Second, the legislation gives states the option of providing Medicaid benefits to disabled children under 21 at home even though these children would not be eligible for SSI benefits due to the income or resources of their parents. The Conference Committee Report notes that while states are not forced to discharge disabled children from institutions, "...in cases where home care would be no more expensive, is medically appropriate, and is what the family and the child want, the Committee believes that states should be allowed to make Medicaid coverage available..." [53].

Third, TEFRA repeals the existing Professional Standards Review Organization (PSRO) program and requires the Secretary of HHS to enter into performance contracts for utilization and quality control peer reviews. Greater efficiency and effectiveness are the objectives of this provision, whether through contracts with existing PSROs or with other organizations competing for contracts under the new peer review system.

Summary

One of the primary objectives of state Medicaid programs is to provide access to health care for low income children. An additional objective, which has become more salient in recent years, is to do so at the lowest possible cost. Physician participation in state Medicaid programs is important to the achievement of both of these objectives and has therefore been a long standing concern of state program administrators. In recent years, evidence has accumulated as to the experiences of physicians with state Medicaid programs. This research makes it clear that many factors, including state Medicaid policies, influence physicians' Medicaid participation.

The new legislative initiatives in Medicaid of the late 1970s and early 1980s gave greater latitude to the states in defining their Medicaid programs. OBRA and TEFRA each left open the possibility of the implementation of considerable policy changes at the state level. These policy changes, and their impact on pediatrician participation in Medicaid, are the subject of the chapters which follow.

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CHAPTER 2

Research Questions and Methods

Theoretical Framework

Chapter 1 established that the willingness of physicians to serve Medicaid eligibles is an important factor in the access of children to health care. While Medicaid pays for the purchase of services, practitioners are free to decline to provide them under the terms offered by the program. In exercising that option, they may frustrate eligibles' efforts to obtain services. In addition, the costs of Medicaid may be higher than necessary if patients substitute more expensive institutional providers for office-based physicians.

Any social welfare program that finances the purchase of goods or services in the private sector depends for its success on the willingness of providers to offer their services to the program's beneficiaries. Therefore, it is essential that all interested parties understand the factors affecting provider decisions regarding participation in public programs. Since the goal of policy research is to guide social action, the objective of the present study is to identify strategies based on research which will enable policy makers to encourage physician participation in Medicaid.

Among the features distinguishing policy research, according to Coleman [1], is its scheme for classifying the variables included in the model that guides the analysis. The traditional distinction between dependent and independent variables is abandoned for a tripartite classification. Dependent variables become <u>outcomes of policy</u>. Independent variables are divided into two categories: <u>policy variables</u>, which are amenable to policy control, and <u>situational variables</u>, which, while influencing the programmatic outcomes, are not themselves subject to the control of policy makers. The latter group of variables must be controlled either in the research design or in the analysis.

Using Coleman's framework to organize this research, we have classified the variables under study as outcome variables, policy variables, or situational variables. Figure 2.1, which depicts the relationships among them, emphasizes the underlying objective of the research: to assess the impact of Medicaid policy on provider participation, controlling for situational factors. The latter include characteristics of the physician, his practice, and the service area in which he is active. The policy variables are of two types. First, there are those creating economic incentives which either encourage or discourage participation. And, second, there are policies which affect the physician's ability to practice his profession and in so doing, also influence his willingness to participate.

What are the situational and policy factors that affect a physician's participation? Four factors are suggested by the two-market theory advanced by economists and by the professional-autonomy theories of sociologists: the overall demand for the physician's services, the financial costs of providing

services, the revenue obtained for the services, and the non-monetary impact on the physician's practice of medicine. The pages that follow include discussions of the two-market theory, theories of professional autonomy, and the four factors derived from them. In addition, we will show that demand and financial costs are situational factors that affect participation in Medicaid, while revenue and professional costs are policy-manipulable factors that shape the economic and professional consequences of physician decisions.

The Two-Market Theory

The economic literature makes several important contributions to our understanding of service provider participation in public programs. This work is based on a theoretical framework referred to as the "two-market theory", which health economists have applied to analyses of physician participation in publicly financed health care programs [2-6]. According to this theory, physicians have two distinct markets in which to sell their services. The markets are defined not geographically, but by the source of payment for the services and, in particular, by whether the payment source requires the physician to accept its compensation as payment-in-full.

The two-market theorists note that in one market the physician functions as a "price-setter", which means that the reimbursement he receives is, in general, on a par with the fee he charges. The payment sources in this market are generally either patients paying directly for services or health insurance companies paying on the behalf of policy-holding patients. An important attribute of this market is that if the physician considers the compensation to be insufficient, he can try to collect from the patient the difference between the billed charges and the reimbursement. For instance, a physician who finds that the proportion of his bill paid by a third party like Blue Shield is too low is free to try to collect additional reimbursement directly from the patient.

In the second of the two markets, on the other hand, the physician is a "price-taker". Here the payment source stipulates that the physician must accept the reimbursement as payment-in-full for the services. The Medicaid program is an example of such a payment source [7]. Whatever the proportion of billed charges actually paid, the physician who accepts payment from Medicaid agrees not to seek further payment from the patient. Since the physician is required to take the reimbursement as payment-in-full, he is said to be a price-taker.

Theorists have developed a behavioral model for determining the amount of services a physician will render in each of the two markets. In the most complete discussion of the theory to date, Sloan and his colleagues argue that the physician's decision regarding whether to provide services in the Medicaid market at all, and if so, the amount of services provided there, are functions of three factors: the demand for the physician's services, the financial costs of providing services, and the revenue obtained for the services [5].

How does the demand for a physician's services affect his or her Medicaid participation? Sloan, Cromwell, and Mitchell assert a complementary relationship between the two markets such that the greater the Medicaid demand, the less the non-Medicaid demand, and vice versa. For instance, demand in both markets is affected by the size of the Medicaid-eligible

population in the physician's service area. In general, it is assumed that the physician would rather be a price-setter and, therefore, have relatively few Medicaid patients, but he is not always able to do so. Sloan et al. identify a variety of factors that may affect demand for a physician's services in either the Medicaid or the non-Medicaid market. These include service area characteristics like per capita income, the number of physicians in the area, and whether or not the practice is located in a metropolitan area. They also include personal characteristics of the physician such as his age, place of medical graduation, and board-certification status. In general, factors that increase non-Medicaid demand are hypothesized to decrease Medicaid demand, and vice versa.

How does the revenue obtained for a physician's services affect his or her Medicaid participation? Sloan et al. observe that the various payment sources pay physicians different amounts for the same services. Under these conditions the physician, just like any other rational seller in the marketplace, can be expected to select as many patients as possible from the market in which the price is highest before selecting patients from the market with the next lowest price, and so on [8]. Because the reimbursement paid by Medicaid is generally the lowest available to a physician, the Medicaid patient will usually be the least desirable patient from a revenue-generating standpoint.

Changes in the revenue available for the services in one of the markets will, other things being equal, either increase or decrease the amount of services rendered in the Medicaid market. An example is a change in the Medicaid reimbursement level. If Medicaid policymakers were to increase this level, the two-market theorists posit that physicians would be willing to see relatively more patients from the Medicaid market. Other factors affecting the revenue obtained for services are the physician's costs of collecting reimbursement from Medicaid, including the proportion of Medicaid claims returned to the physician for additional work, the time it takes to fill out a claim, and the time it takes the Medicaid program to pay his bills. These factors represent aspects of Medicaid policy that either foster or hinder participation in the program.

Finally, the two-market theorists note that participation in the Medicaid market is also, in part, a function of the cost to the physician of providing services. They posit that as practice costs rise, the extent of Medicaid participation declines because the fees paid by Medicaid, which tend to be less than those from other payers, are less likely to cover the physician's costs. Similarly, the physician with relatively low practice costs is expected to have relatively more participation in the Medicaid market. The salaries the physician pays to his nonphysician personnel are among his practice costs. An increase or decrease in this component of practice costs is expected to affect Medicaid participation in the manner just described, other things being equal.

In summary, the two-market theory identifies three factors in provider participation decisions: the demand for the physician's services, the revenue obtained for the services, and the costs of providing services. It is useful to note that the demand and practice-cost variables are situational in nature and, therefore, while they may influence participation, they are not subject to change through Medicaid policy [9]. The revenue variables, however, <u>are</u> subject to change through policy intervention. Indeed, by increasing or

decreasing a physician's revenue, policies create very explicit economic incentives which foster or hinder participation. As noted earlier, we expect that increasing the Medicaid reimbursement level or reducing the costs of collecting from Medicaid would foster participation.

The theoretical framework presented in Figure 2.1 illustrates that Medicaid policies affect not only the economic incentives facing the physician, but also his professional autonomy. While the impact of what we have called "professional costs" on participation has not been estimated by health economists, sociological theories of professions lead one to expect that such costs may also foster or hinder physician participation in Medicaid. The contribution of sociological theories of professions to understanding provider participation in public programs is discussed below.

Theories of Professional Autonomy

Just as there exist two markets that are distinguishable by whether or not the physician must accept the compensation offered as payment-in-full, there are also two markets distinguishable by the extent to which the payment source infringes on the physician's professional autonomy. Just as the markets create different economic incentives, they can also create professional incentives that either foster or hinder Medicaid participation. It will be noted below that the various sources paying for medical care can be expected to intrude to differing degrees on professional autonomy. Under these conditions the physician can be expected to select as many patients as possible from the market in which encroachments upon professional autonomy are minimized before selecting patients from the market with the next greater encroachments, and so on. Since Medicaid's intrusiveness upon professional autonomy is generally believed to be relatively substantial, from a professional standpoint, too, the Medicaid patient is expected to be a relatively undesirable patient.

Why is the preservation of professional autonomy so important to the physician? First, autonomy is among the defining characteristics of a profession. The literature shows a clear consensus on the definition of a profession as an occupation based on prolonged specialized training in a body of knowledge whose practitioners have a service orientation and autonomy in the performance of their work [10-13]. Moreover, some authors have argued that autonomy is the predominant characteristic of a profession. Friedson, for example, writes that, "the only truly important and uniform criterion for distinguishing professions from other occupations is the fact of autonomy -- a position of legitimate control over work" [13]. In this view, then, the preservation of autonomy is synonymous with the preservation of one's status as a professional and, therefore, must be important to the physician.

Second, professional status is vulnerable [13,14]. The society in which a professional practices must be persuaded that an occupation's claim both to special knowledge and to a service orientation is legitimate. Similarly, autonomy cannot simply be taken upon oneself but, rather, must be conferred. Whether formally by the state or by the aggregate behavior of the general public, a profession's privileged position must be granted, and then must continue, over time, to be legitimated [13]. Friedson writes:

> If a profession's work comes to have little relationship to the knowledge and values of its society,it may have difficulty surviving. The profession's privileged position is given by, not seized from, society, and it may be allowed to lapse or may even be taken away [13].

Friedson [13], Toren [15], and others [11,16-18] speak of the maintenance of professional status as an ongoing struggle involving both persuasion and political negotiation. The profession of medicine engages continually in this struggle. The sources of pressure for deprofessionalization, which act upon medicine as well as other professions, are varied. they include, for example, the routinization of previously non-routine work. Toren notes that society confers autonomy in part because of the non-routine nature of the work which requires the unhampered exercise of the practitioner's expertise and judgment. To the extent that the work becomes more routinized, this rationale for conferring autonomy on the occupation is weakened. Toren also notes that autonomy is conferred on the basis of the occupation's service orientation -- its dedication to pursue the client's best interest. However, she notes that if the service orientation is not adequately upheld, or if society shifts its definition of what is in the client's best interest, this basis for conferring autonomy to the occupation may also be weakened [15]. Finally, as the previous quotation from Friedson makes evident, changes in the society's knowledge or values may lead to pressure for deprofessionalization and the withdrawal of autonomy [13].

Recent structural changes, too, threaten to erode the medical profession's autonomy. These include movement away from solo practice and toward practice in large-scale, lay-administered settings [13]. The former structure epitomized professional independence and autonomy. The latter brings greater peer interdependence and pressure for accountability with a corresponding reduction in a profession's autonomy. With the decline in the simple physician-patient dyad has come a modification in extent of traditional professional autonomy. Not surprisingly, the medical profession tries to resist these changes in part to preserve its professional status.

The increased role of third-party payers in the financing of medical care is another structural factor that has brought pressure for deprofessionalization and erosion of physician autonomy. In 1963 Anderson and Lyden noted that

> Over one-half of the general hospital bill and an increasingly greater proportion of the physician's fees are being paid by a third party rather than by the patient directly. These developments have placed the practice of medicine under increasing scrutiny. As a consequence, some feel that the freedom needed by the profession to practice medicine effectively is being jeopardized; others feel that the practice of medicine will be improved by systematic supervision and review in an organized structure [19].

This trend toward third-party payment and the accompanying infringement of autonomy has only expanded since 1963. A major source of growth in third-party financing of health care came with the advent in the mid-1960s of the public programs, Medicare and Medicaid [20].

Thus, as major purchasers of health care, federal and state governments have joined the ranks of the forces encroaching on the professional autonomy of physicians. As Toren said:

> Governments, too, have recently reconsidered their policy and positions in relation to the professions and have begun to exercise more fully their authority to decide on the quality and quantity of services needed for the welfare of society and its members. This is not unlike the earlier intervention of government in the economic sphere and its restrictions on the laissez faire doctrine of business. In essence, no group, however vital or influential, is accorded the exclusive right to determine how the general welfare will best be served. The most notable case in this respect -- for it concerns the most prestigious and powerful profession -- is illustrated by the federally enacted and sponsored programs of Medicare and Medicaid. Recent amendments to the original statute express the government's wish to supervise albeit through professional bodies, the distribution, quality, and costs of medical care in these programs [15].

Here Toren observes the state's increasing interest in regulating aspects of publicly financed health care. Remarking on the same trend, Wolfe and Badgley have observed that "he who pays the piper wants to call the tune" [21].

We note, then, a general tendency on the part of the payment source to impinge on the autonomy of the provider of services. However, this tendency can be expected to vary across payment sources. It is likely to be least pronounced, for example, when the patient pays the physician directly because the individual has the least capacity for challenging either the knowledge base or the service ideal of the medical profession. And, further, he or she lacks the influence which comes from being a large purchaser. The status of the professional, therefore, seems most completely preserved at the level of the patient-physician transaction.

Other payment sources, however, as third parties to the patient-physician transaction, are in a different position than the individual patient regarding both the motive and the ability to challenge professional autonomy. Insurance companies and other payers employ medical professionals to redress the imbalance in knowledge and, thus, to equalize the parties by undermining the practicing physician's claim to privileged status based on a special knowledge base. The third-party payer may also have both the motive and the capacity to challenge the physician's claim to be acting in the patient's best interest by providing specific services. It may have a different idea about the patient's interest, such as restraint in the provision of services and the cost containment which results [22]. The payer may try to foster different behavior in the physician, such as curtailing laboratory tests, limiting surgery, or substituting generic drugs for more expensive brand names. Such attempts to foster cost-conscious behavior may be perceived by the medical profession as encroachments upon the free exercise of professional judgment or, in other words, as professional costs associated with providing services to patients whose care is paid for by that particular third-party payer.

The various third party payers may have different tendencies to interfere with the physician's judgment. For example, Anderson [23] and Law [24] have described Blue Cross and Blue Shield plans as historically having worked with

the medical profession rather than being in conflict with it. This might lead us to suppose that these payers pose a lesser threat to physician autonomy. However, the question of whether various third-party payers do, indeed differ in their tendency to challenge professional autonomy is an empirical question as yet unaddressed in the literature. The sociological theories of professional autonomy suggest, at a minimum, that to the extent the physician has alternatives, he or she will behave in a manner which tends to minimize professional costs and preserve professional autonomy.

While the entire range of third-party payers has not been examined for the relative degree of professional costs imposed on physicians, Davidson has considered the professional costs imposed by Medicaid in some detail [25]. He points out that specific aspects of Medicaid policy, such as the scope and duration of the services covered by a state, may affect professional autonomy and the free exercise of medical judgment. When these professional costs become great enough, they may affect Medicaid participation.

> . . . physicians are influenced principally by fiscal considerations and by factors that interfere with their ability to exercise their professional judgment . . . Accordingly, if an administrative decision or policy diverges enough from their wishes or expectations, or, more likely, if an accumulation of state actions offends them sufficiently, they are likely to reduce or end their participation in the program, other things being equal [25].

Underlying Davidson's discussion is the hypothesis that changes in the professional costs imposed by Medicaid will result in changes in participation. The professional incentives created by Medicaid will influence whether or not the physician provides services to Medicaid-eligibles and the extent to which such services are provided. Thus, for example, if a state removes restrictions on the amounts of particular services that can be provided by physicians, such a policy change could be expected to foster professional autonomy and, therefore, participation. Similarly, if a state's overall Medicaid policy environment is less rather than more restrictive, one could expect relatively more participation. These factors represent aspects of Medicaid policy which, by creating professional incentives or disincentives, either encourage or discourage participation.

Hypotheses

Thus, the economic two-market theory and sociological theories of professional autonomy provide a basis for interpreting providers' responses to different payment sources. Using this theoretical framework, we can derive hypotheses concerning the effects of various situational and policy characteristics on physician participation in Medicaid. The following sections will describe more specifically the outcome, situational, and policy variables used in the analysis, and will discuss our hypotheses about the relationships among them.

Outcome Variables

The outcome variables measure the participation of physician in Medicaid. A simple and commonly used approach is to measure whether or not a physician treats Medicaid patients [3,6,26-28]. A variant of this measure classifies small amounts of Medicaid participation as nonparticipation; in one study, for instance, physicians who saw fewer than 10 Medicaid patients per quarter were classified as nonparticipants [2].

Access to health care may be restricted if Medicaid participants accept only a few patients. It is important therefore to consider more sensitive measures of Medicaid participation. One measure frequently used in multivariate analyses of Medicaid participation is extent of participation, or the amount of a physician's practice devoted to Medicaid [2,6,27,29,30]. In addition, one can measure whether a physician limits his acceptance of Medicaid patients or accepts all who seek his services [31].

Three measures of physician participation are examined in this study: participation and nonparticipation, extent of participation, and full and limited participation. The first and second measures are based on physicians' responses to a survey item that asked "What proportion of your patients are covered by Medicaid?" This question elicited a continuous measure of participation that ranged from zero to 100 percent. Physicians were classified as Medicaid participants if they reported that one percent or more of their patients were Medicaid clients; physicians reporting zero percent were considered nonparticipants. For the second measure, extent of participation, nonparticipants were omitted; the variable is continuous and assumes values from one to 100. The third, full and limited participation, is coded only for all Medicaid participants who are accepting all new non-Medicaid patients who contact them. Thus, it focuses on the Medicaid decisions of participating physicians with room in their practices for additional patients. This dichotomous variable measures whether these physicians are accepting all (full participation) or only some (limited participation) Medicaid patients who contact them.

Situational Variables

Our primary interest is in the effects of Medicaid policy on provider participation. However, to present an accurate picture of the relationships, we must control for the effects of situational variables on participation as well. The situational variables considered here fall into two categories: personal and practice characteristics of the physician, and characteristics of the service area in which the physician practices. These variables may affect either the demand for the physician's services or the costs of providing those services, and thus the physician's Medicaid participation.

Personal and Practice Characteristics -- Several personal characteristics are expected to affect demand, especially non-Medicaid demand, for the physician's services. Three such characteristics, place of medical graduation, whether the physician is certified by a specialty board, and age are included in the analysis. (See Appendix C for a technical description of these variables and sources of data.) We hypothesized that graduates of U.S. medical schools and board-certified physicians are able to command more

patients from the higher priced non-Medicaid market, and thus that foreign medical graduates and physicians who are not board-certified participate more in Medicaid [3,6]. We also hypothesized that age would affect the physician's ability to attract non-Medicaid patients, with older, better-established physicians participating less in Medicaid than their younger counterparts [3,6].

Practice costs were also hypothesized to influence Medicaid participation: physicians with higher practice costs have a greater incentive to serve the more lucrative non-Medicaid market. Salaries paid by the physician to nonphysician personnel are a major component of practice costs, and thus are expected to have an inverse association with Medicaid participation [2,4]. A hospital wage index developed by the Health Care Financing Administration served as a proxy for nonphysician personnel costs; it is updated regularly and reflects wage differentials across Standard Metropolitan Statistical Areas (SMSAs) and nonmetropolitan counties in each state.

In addition to considering the influence of demand and practice costs on Medicaid participation, it is important to consider the effect of a physician's attitudes. Here, the physician was asked to indicate the extent of his agreement with this statement: "Some people believe it is the responsibility of society, through its government, to ensure that medical care is available to those who cannot afford it. Do you agree with that strongly, agree somewhat, disagree somewhat, or disagree strongly?" The four response categories were collapsed, and a dichotomous variable indicating whether the physician agreed or disagreed was created. We hypothesized that physicians who agreed would be more likely to participate, and would participate to a greater degree than those who disagreed.

Service Area Characteristics -- Demand for a physician's services may also be affected by characteristics of the service area in which he practices. We included in the analysis four service-area characteristics related to demand: the per capita income in the service area, the supply of medical resources in the area, metropolitan vs. nonmetropolitan practice, and the relative size of the Medicaid-eligible population.

The per capita income in the service area can be used to estimate demand in the Medicaid and non-Medicaid markets. We expected per capita income to be inversely associated with Medicaid participation because areas with higher income levels will have proportionally higher demand from the non-Medicaid market [5,6]. Similarly, the estimated proportion of the population covered by Medicaid indicates the relative size of the Medicaid market, and is expected to be positively associated with Medicaid participation [2,3,6]. Both of these variables were measured for the zip code area in which each physician practiced.

Health care resources in the area also affect demand from the Medicaid and non-Medicaid markets. Two-market theorists have suggested that in areas with relatively more health care resources, each provider will have less demand from the preferred non-Medicaid market. They posited, therefore, greater Medicaid participation where medical resources were relatively abundant [2,3,6]. The availability of health care resources was captured with a variable measuring the number of active physicians per 100,000 county

population. We expected Medicaid participation to be positively associated with this measure of physician supply.

A dichotomous variable for metropolitan practice was included to provide additional control for metropolitan-nonmetropolitan differences in the demand for physician services [3]. Demand from the Medicaid market is likely to be higher in metropolitan areas since Medicaid recipients are disproportionately concentrated there; therefore, we would expect Medicaid participation to be higher in metropolitan areas.

Policy Variables

The policy variables measure aspects of state Medicaid policy that may either foster or hinder pediatrician participation in Medicaid. These variables are subject to deliberate alteration by state officials, at least to the extent that political and economic constraints permit. The effects of Medicaid participation on these policy characteristics, both individually and in conjunction with one another, are the focal point of this analysis. Our theoretical framework suggests that policies creating economic incentives and minimizing encroachments on professional autonomy will be associated with greater Medicaid participation. Economic and professional incentives will be discussed in turn.

Economic Incentives -- Both the level of Medicaid reimbursement and the costs of collecting that payment contribute to the net economic incentives influencing participation. The first variable measures the level of each state's Medicaid reimbursement. The two-market theory suggests that physicians will select as many patients as possible from the market in which the fee is highest before selecting patients from the market with the next lower fee, and so on. Thus, we hypothesized that the level of Medicaid reimbursement available in a state is directly associated with Medicaid participation. The Medicaid reimbursement variable is the average ratio of expected Medicaid reimbursement to the physician's usual fee for a follow-up office visit, both of which are taken from survey items. This variable is measured at the SMSA level in cases in which at least three physicians in the SMSA responded to the survey items concerning reimbursement and fees. Data on reimbursements and fees for other metropolitan physicians as well as nonmetropolitan physicians were averaged together by state.

In addition to state reimbursement levels, costs of collecting reimbursement from Medicaid were expected to contribute to the economic incentives influencing participation decisions. We hypothesized that relatively lower costs of collecting payment from Medicaid would be associated with greater Medicaid participation [25]. The physician surveys obtained data on three different measures of collection costs. (See Appendix A.) However, only one was selected for the analysis: the number of weeks it took to receive payment from Medicaid. We expected payment delay to vary inversely with Medicaid participation.

Professional Incentives -- Just as payment sources create economic incentives, they also create professional incentives which may foster or hinder Medicaid participation. Under these conditions the physician can be expected, given the theories of professional autonomy described above, to

select as many patients as possible from the market in which encroachments on his professional autonomy are minimized. Since Medicaid's intrusiveness on professional autonomy is generally believed to be greater than that of other payers, the Medicaid patient is expected to be, from a professional cost point of view, the least desirable patient.

The Revised Medicaid Program Index (RMPI) reflects attributes of state Medicaid policy which are expected to affect the physician's professional autonomy [32]. The six components of the index are as follows (See Appendix C for a technical description of the variable and data sources.):

1. The procedures used for determining the reimbursement of providers;

2. The number of services covered by the state beyond those it is required to cover;

3. The limitations placed on the provision of the mandated services;

4. The eligibility criteria for Aid to Families with Dependent Children (AFDC) recipients;

5. The eligibility of the medically needy for Medicaid benefits;

6. The status of the state's Medicaid Management Information System (MMIS).

The coded values for each component are summed to obtain the total RMPI score for each state. The higher the state's score on this Index, the more the state's Medicaid policies are thought to foster Medicaid participation. The six components of state Medicaid policy are discussed in turn below.

First, Medicaid reimbursement procedures (as opposed to reimbursement levels) restrict to a greater or lesser degree a physician's control over reimbursement for services. The procedures range from those which physicians consider to be quite restrictive (fee schedules) to those over which physicians retain complete control (their own current usual fees). We expected that reimbursement procedures that did not encroach on professional incentives would encourage physicians to participate in Medicaid [3,25].

Perhaps the most direct threat to professional autonomy is interference with professional medical or clinical judgment. Two aspects of Medicaid policy may constitute such interference. The first is a program's failure to cover a full range of optional services beyond the minimum required by federal Medicaid regulations. Second, states may impose limitations on the amount, duration, and scope of the federally-mandated services, or may require that the provider obtain authorization from program staff before rendering a particular service. Any of these conditions may be a barrier to the free exercise of professional judgment, and may be perceived as a drawback of treating Medicaid patients. A physician who finds that an indicated course of treatment is not reimburseable must face the difficult choice of not providing (or referring for) the indicated service or doing so with the knowledge that the provider, whether himself or another, will not be compensated for his efforts. We expected that to the extent that a state provides few optional services and imposes limitations and prior authorization requirements on

mandatory services, physicians will feel their professional autonomy has been infringed and will be discouraged from participating [25].

In addition to reimbursement and service coverage, aspects of Medicaid eligibility policies also affect the program's professional costs [25]. Medicaid eligibility is tied to welfare (in this case, AFDC) eligibility, which in turn is determined in part by a family's monthly income; fluctuations in income, therefore, may affect Medicaid eligibility. Unstable eligibility status presents a problem for both patient and physician. A patient may begin a course of treatment in one month, but no longer be eligible for Medicaid benefits at the time of follow-up appointments in succeeding months. The physician may find that given a family's still limited resources, such changes in a child's eligibility status put in jeopardy the completion of a course of preventive or therapeutic services. These changes also put in doubt reimbursement for services already rendered. Thus, both professional and economic costs are associated with treating such patients.

While fluctuating eligibility status is a problem for Medicaid-eligible children in all states, it seems likely that the problem would be more severe in states in which the welfare eligibility criteria were set relatively low. Also, in states with low eligibility levels, families would be less able to bear the costs of ongoing medical care when their Medicaid benefits were terminated. In addition, policies for the medically needy (persons unable to pay for needed medical care but whose incomes exceed the welfare eligibility levels) would also affect stability of Medicaid eligibility status. Physicians in states without a medically needy program, or in states with less generous medically needy programs, are more likely to experience problems with fluctuations in their patients' eligibility status, and their associated economic and professional costs [33].

Finally, we hypothesized that the economic and professional costs associated with state Medicaid claims-processing systems also influence a physician's participation decisions. Many states have a certified Medicaid Management Information System (MMIS), a federally approved computerized claims processing system. These were designed not only to promote the efficiency of Medicaid claims-processing systems, but also to generate data for management concerning the program's performance. We expected that the use by the state of an MMIS would foster Medicaid participation through the prompt and efficient handling of claims.

Summary

Based on our theoretical framework incorporating the two-market theory and theories of professional autonomy, we have generated a series of hypotheses concerning the effects of our situational and policy variables on the measures of Medicaid participation used in the study. These hypotheses are summarized in Table 2.1.

Research Methods

The data presented in the following chapters are drawn primarily from physician surveys conducted under the auspices of the American Academy of Pediatrics in 1978 and 1983. (For a more detailed discussion of research methods for the 1978 survey, see the Final Report [34].) For each study, approximately 800 office-based pediatricians were surveyed concerning their Medicaid participation and other aspects of their practice. In addition, both the individual-level and the state-level analyses employed information from a variety of secondary sources. In this section we describe the sampling design and data collection procedures for the surveys, as well as the secondary sources used for the multivariate analyses and the state case studies.

Sampling Design: Interstate Variations

As we emphasized earlier, states retain broad discretion over the establishment of Medicaid policies under the design of Title XIX. Considerable interstate variation exists in many of the Medicaid policies expected to influence pediatricians' decisions about participation in Medicaid. Factors such as Medicaid eligibility levels, covered services, and reimbursement levels -- all of which can be expected to either foster or hinder physician participation -- are subject to state discretion.

The variation among state Medicaid programs provides a natural opportunity to examine the impact of state Medicaid policies on pediatrician participation in the program. The 1978 study exploited that opportunity through the use of a two-stage sampling plan: first, a sample of thirteen states was chosen, and second, randomly selected pediatricians practicing in those states were surveyed.

State Sample -- States were selected using a method designed to yield a sample of states with diverse Medicaid program characteristics. Each of 50 Medicaid jurisdictions (49 states and the District of Columbia. Arizona had no program.) was assigned values from two indices which summarize important aspects of state Medicaid policies.

The first index is the ratio of Medicaid reimbursements to payments in the Medicare market, which is taken as an approximation of physician fees [36].. The index is based on maximum allowable Medicare and Medicaid reimbursements for fiscal year 1975. Indices of specialist fees were developed for each county, adjusted for cost of living, and then aggregated into state indices. Values ranged from 100 -- when Medicare and Medicaid reimbursements are identical -- to a low of 39. At the time of the original Medicaid participation study, when the state sample was chosen, this index was the only attempt in the literature to establish the relative level of states' Medicaid reimbursements. While Medicaid payments are compared with Medicare payments rather than with the private market, "since Medicare reimbursement practices were designed to mirror the private market, Medicare reimbursement rates may be generally representative of many private insurers" [35].

The second index, the Medicaid Program Index (MPI), summarizes state Medicaid program characteristics in three key areas: eligibility criteria,

covered services, and methods of reimbursement [32]. It is an earlier version of the policy index (see Appendix C) used in the analysis. States are assigned scores for their policies in four different areas: medically needy programs, the number of optional services covered, the extent to which limitations and requirements for prior authorization are imposed, and the procedures for determining reimbursement. The state MPI scores were obtained by adding the scores for these four aspects of policy; in 1975, the scores ranged from 6 to 13. The higher the score, the less restrictive the Medicaid policies are considered to be.

The fee index and the Medicaid Program Index provided the bases for characterizing state Medicaid programs. The ranges of these two indices were dichotomized and states were classified into one of four categories depending on their reimbursement levels and Medicaid policy scores. The thirteen study states were chosen randomly from each of the four categories, with the probability of selection weighted positively toward states with large numbers of pediatricians [35]. Since large states (those with the largest number of pediatricians and with the largest Medicaid programs) have great impact on the national Medicaid program, it is particularly important for policy research that several of them be included in the study. The study states chosen by this method are shown in Table 2.2.

Pediatrician Sample: 1978 -- Randomly sampled non-federal, office-based physicians, distributed approximately equally across the thirteen states, were selected from self-designated pediatricians included in the American Medical Association's Masterfile, the most complete enumeration of American physicians available. The sampling frame included not only physicians who were certified by the American Board of Pediatrics, but any physicians who considered their primary specialty to be pediatrics.

The pediatrician population in each state was sorted into five strata according to size of county population:

Counties in Metropolitan Areas (SMSAs)

3,500,000+ population

1,400,000 - 3,499,999 population

250,000 - 1,399,999 population

50,000 - 249,999 population

Counties in Non-metropolitan Areas

Within each stratum a sample of pediatricians was drawn, with the sampling rate for each level proportional to its share of all pediatricians in the state. The sampling scheme was designed not to over-sample any subclass of the state pediatrician population, but rather to assure that the resulting sample was maximally representative. Of the 1,457 pediatricians sampled, 879 were found to be eligible for the survey, and personal interviews were completed with 814, for an overall survey response rate of 92.6 percent. (See Appendix B for a more detailed discussion of survey ineligibility and nonresponse.)

Pediatrician Sample: 1983 -- The pediatricians surveyed in 1983 included the panel of 814 respondents from the earlier study of physician participation. Addresses of panel physicians were confirmed and updated using the AAP membership files, telephone directory assistance services, and the state medical licensing boards. While there was some attrition due to retirement, death, moves out of state, or changes in practice characteristics (see Appendix B), all but four of the panel physicians were located.

A supplementary sample of pediatricians entering practice since 1978 was added to ensure that the age distribution of physicians surveyed in 1983 was representative of the pediatrician population. Pediatricians just entering practice behave differently with respect to Medicaid from their older, better-established colleagues, so having a sample that is representative with respect to age was important for this study. In addition, these physicians were expected to be more strongly affected by competition and alternative delivery systems, so they were over-sampled to provide large enough sample sizes for separate analyses. Survey data were weighted to reflect the 1981 population of office-based pediatricians in each state.

The "new physician sample" of 673 physicians was selected from the American Medical Association's Masterfile. The sampling frame included all non-federal, office-based pediatricians in the 13 study states completing medical school after 1975. The initial sample included 427 pediatricians distributed approximately evenly across the thirteen states. However, these young physicians are a highly mobile group who proved difficult to locate for the survey; in addition, many were ineligible for the survey because of their practice arrangements (see Appendix B). To ensure adequate sample sizes for each state, an additional 246 pediatricians were added to the initial sample later in the field period.

Of the 1,487 pediatricians sampled, 992 proved to be eligible for the survey, and 791 completed questionnaires for an overall response rate of 79.7 percent. Response rates for the panel and "new physician" sample were 83.7 percent and 71.9 percent respectively.

Data Collection: Instruments and Field Procedures

The 1978 survey used a personal interview designed to elicit information about the pediatricians, their practices, their attitudes and opinions, and their experiences with Medicaid and other payment sources. (See Appendix A-2 for a copy of the interview schedule.) This survey was conducted by the National Opinion Research Center under a subcontract with the American Academy of Pediatrics.

Despite the length of the personal interview, which took an average of 45 minutes to complete, item nonresponse was minimal. Respondent burden was minimized by allowing someone other than the physician, such as the clerk who handled billings, to complete the questions about payment sources. In 58 percent of the cases someone other than the physician did complete these items, but statistical tests revealed no significant differences between physicians and non-physician personnel in response to these items.

The follow-up study employed a mailed questionnaire adapted from the interview schedule and telephone screener form (See Appendix A-3 for a copy of the questionnaire). In an effort to minimize respondent burden, not all of the lengthy interview schedule was included in the questionnaire; items were chosen on the basis of their usefulness in the original analysis. In addition, new questions on changes in practice characteristics, competition, uncompensated care, and attitudes toward contracting and alternative delivery and financing systems were included, as well as several questions concerning choice of practice arrangements and location for the sample of new physicians. When absolutely necessary, items from the 1978 personal interview were reworded for clarity in the 1983 questionnaire, and length of time to complete the questionnaire was limited to an estimated 15 to 20 minutes to minimize nonresponse. As in the previous survey, item nonresponse was minimal.

The field period began with an endorsement letter to the sample of physicians from the AAP state Chapter Chairman. A letter from the Executive Director of the AAP accompanied the mailed questionnaire. Follow-up efforts by telephone and letter raised the response rate to 79.7 percent. (See Appendix B for a more detailed discussion.)

Secondary Sources

Multivariate Analysis -- The data collected in the two surveys of physician Medicaid participation were supplemented with data drawn from a variety of secondary sources. State and zip-code area socioeconomic characteristics were taken from the 1970 and 1980 U.S. Census. The Area Resource File (ARF) of the Bureau of Health Professions supplied county and state-level health resources and socioeconomic information. Other data, including those used to update components of the Medicaid Program Index and Revised Medicaid Program Index, came from publications of the Health Care Financing Administration, the Office of Family Assistance (DHHS), the Bureau of Labor Statistics, and the Commerce Clearing House, Inc. publications on Medicaid regulations. (See Appendix C for a complete description of sources of data for variables used in the analysis.)

State Medicaid Case Studies -- The thirteen case studies describe changes in the study states' Medicaid programs during the five-year period between the physician surveys, with particular attention to policy changes mandated or permitted by the Omnibus Budget Reconciliation Act (OBRA) of 1981, the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982, and other Reagan-era legislation. The reports examine trends in eligibility, benefits, and reimbursement particularly as they pertain to child health and primary care, and review each state's cost-containment activities in the context of economic and policy developments. A concluding section considers the policy implications of this information in light of the results of the American Academy of Pediatrics 1978 and 1983 surveys of pediatrician participation in the Medicaid program.

Publications of the Health Care Financing Administration and reports by the National Governors' Association, the Intergovernmental Health Policy Project, and La Jolla Management Corp., were used to monitor these Medicaid policy changes over the five-year period. The assessments of Medicaid cost-

containment activities draw on the sources cited above, as well as other recent studies focusing on particular states, services, or issues.

State Medicaid officials and American Academy of Pediatrics "key Medicaid contacts" (pediatricians who are particularly knowledgeable about the Medicaid program in their state) reviewed the draft reports and verified their accounts of state Medicaid program characteristics. However, given the complex and rapidly changing nature of the Medicaid policy environment, some information may be inaccurate or quickly outdated.

Table 2.1:

Hypotheses

Variable	Predicted Direction of Effect on Participation
I. Situational Variables	
A. Personal and Practice Characteristics	
Age	-
Place of medical education	+
Board certification status	-
Responsibility of society to ensure that medical care is available	+
Nonphysician personnel costs	-
B. Service Area Characteristics	
Zip code area per capita income	-
Active physicians per 100,000 county population	+
Estimate of proportion of zip code area population on Medicaid	+
Metropolitan/nonmetropolitan	+
II. Policy Variables	
A. Economic Incentives	
Ratio of Medicaid reimbursement to usual fees	+
Elapsed weeks between billing and payment of Medicaid claims	-
B. Professional Incentives	
Revised Medicaid Program Index	+

Figure 2.1

Theoretical Framework of Provider Participation in Public Programs

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----------------------------------------
|                                      |
|  SITUATIONAL VARIABLES               |
|                                      |
|  Personal Characteristics            |
|                                      |
|    Age                               |
|    FMG                               |
|    Boarded                           |
|    Attitude toward access            |
|                                      |_____
|  Practice Characteristics            |     |
|                                      |     |
|    Nonphysician personnel            |     |
|    costs                             |     |
|                                      |     |
|  Service Area Characteristics        |     |
|                                      |     |
|    Per capita income                 |     |
|    MDs                               |     |
|    Medpop                            |     |
|    Metropolitan                      |     |____>|                    |
|______________________________________|           |  Provider          |
                                          _____>|  Participation     |
                                         /      |                    |
                                         |      |____________________|
----------------------------------------|
|                                      |     |
|  POLICY VARIABLES                    |     |
|                                      |     |
|  Economic Incentives                 |     |
|                                      |     |
|    Reimbursement level               |     |
|    Collection costs                  |_____|
|                                      |
|  Professional Incentives             |
|                                      |
|    Revised Medicaid Program Index    |
|______________________________________|
```

Table 2.2

State Sample

1975 Medicaid Program Index	Fee Index: Low (39-90)	Fee Index: High (92-100)
Low (6-10)	Pennsylvania	Georgia
	Maryland	Tennessee
	Colorado	Oklahoma
High (11-13)	California	Texas
	New York	Indiana
	Massachusetts	Iowa
		Nebraska

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7. Like Medicaid, Blue Shield service-benefit plans and the Medicare assignment of benefits option require that the physician accept their reimbursement as payment-in-full. Thus, the distinction between these two markets is not simply private and public. In the present discussion, however, the focus is on contrasting Medicaid, where the physician is price-taker, with the predominantly privately financed price-setting market.

8. While referring to only two markets is useful because it emphasizes the distinctions, it is useful to recognize them as ideal types at opposite ends of a continuum. Between the two extremes are intermediate types in which the price the physician takes is closer to or further from the price he sets. In some instances the price actually received may be determined through negotiation.

9. Whether a variable should be considered a situational or a policy variable depends upon the policy being studied. For example, it might be possible to use health planning policies to effect changes in a certain aspect of demand such as the supply of medical resources in the physician's service area. While such a change would affect Medicaid participation, it would not be a result of Medicaid policy. For the purpose of this analysis, the policy variables are those that can realistically be caused to vary by changes in Medicaid policy only.

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22. This discussion is not intended to suggest that practicing physicians act only out of financial self-interest and use their professional autonomy to defend their behavior. The practice of medicine is the exercise of judgment in the face of uncertainty, and it is quite common for well-trained, experienced, and conscientious professionals to disagree on the best decision for a patient.

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CHAPTER 3

Nonparticipation and Participation in Medicaid

Introduction

Prior to the 1978 study of pediatrician participation in Medicaid, there had been no reliable estimates of the proportion of pediatricians participating in state Medicaid programs. The 1978 research was motivated, in part, by concerns that pediatrician participation in the program was low and that children's access to pediatric care was, as a result, restricted. The first measure of Medicaid participation we constructed, then, was a simple dichotomous variable based on whether a physician reported having any Medicaid patients in his or her practice--that is, his or her Medicaid participation status. As the previous chapter suggests, participation status is likely to be the result of a variety of situational and policy factors. Survey and secondary data enable us to consider the effects of these factors on participation in both 1978 and 1983.

This chapter begins by examining trends in participation between the two survey years. The next section sets the context for the multivariate analysis by comparing characteristics of participants and nonparticipants. Third, the cross-sectional multivariate analyses of the determinants of Medicaid participation in 1978 and 1983 will be discussed. Finally, we describe the panel analysis, which examines change or stability in participation and nonparticipation between 1978 and 1983.

Descriptive Statistics

Between 1978 and 1983, the rate of Medicaid participation for the entire sample declined from 85 percent to 82 percent, a change which is statistically significant at the $p<.10$ level. In other words, the proportion of pediatricians with no Medicaid patients increased from 15 percent in 1978 to 18 percent in 1983. Clearly, despite the many changes in the practice and policy environments, an overwhelming majority of office-based pediatricians continue to participate in Medicaid.

The rate of participation varies considerably from state to state, from a high of 100 percent in Iowa to a low of 42 percent in Georgia. As in 1978, nonparticipation is concentrated in the southern states: 58 percent of all nonparticipants in our thirteen state sample practice in Georgia, Maryland, Oklahoma, Tennessee, and Texas. However, only three states, Georgia, Pennsylvania, and Texas have participation rates below 80 percent. These interstate variations are discussed in further detail in Chapter 6.

As would be expected, physicians entering practice in the last five years are more likely to have Medicaid patients than their more established counterparts. Pediatricians in the "new M.D. sample" have a participation rate of 87 percent, compared with 81 percent for the panel.

Zero-Order Relationships

Table 3.1 summarizes the bivariate relationships in 1978 and 1983 between Medicaid participation and the independent variables. The table presents group means for the continuous variables and the percent of participants and nonparticipants in the reference category of each categorical variable.

In both 1978 and 1983, participants tended to be younger than nonparticipants. The average age for participants was about four years less than that for nonparticipants. In both years, Medicaid participants were not significantly more likely than nonparticipants to be foreign medical graduates, but were significantly more likely to agree that society had a responsibility to ensure that medical care was available. While there was no difference between participants and nonparticipants in specialty board certification status in 1978, the 1983 data show that physicians who accept Medicaid patients are more likely to be board-certified than those who do not-- 82 percent of Medicaid participants are board-certified, compared with 72 percent of nonparticipants. Average personnel costs were virtually the same for participants and nonparticipants in both 1978 and 1983.

Among the service area characteristics, Table 3.1 shows that Medicaid participants tend to practice in areas with lower per capita incomes and a higher proportion of Medicaid recipients. Contrary to the premises of the two-market theory, participants were <u>less</u> likely than nonparticipants to practice in urban areas, and tended to practice in areas with <u>fewer</u> physicians per 100,000 population. These simple zero-order relationships look very similar in 1978 and 1983; all comparisons were statistically significant except those of physicians in metropolitan and nonmetropolitan areas in 1978.

The multivariate model also includes two state Medicaid policy variables, the ratio of reimbursement to usual fee and the Revised Medicaid Program Index (RMPI). Surprisingly, in 1978 the average ratio of reimbursement to fees was lower for participants than for nonparticipants. However, in 1983, the average ratio was higher for participants and the difference was significant. The data show a positive relationship between the RMPI and Medicaid participation in both years.

These zero-order relationships suggest ways in which situational and policy characteristics influence a physician's Medicaid participation. Many of these variables may be interrelated, however, and these zero-order associations do not control for that possibility. A multivariate analysis is needed to determine the contribution of each factor while controlling for the effects of the others. Both the cross-sectional analyses of participation in 1978 and 1983, and the analysis of participation in the panel use discriminant analysis.

Multivariate Analysis: 1978 and 1983

Table 3.2 displays the coefficients for the discriminant analysis of participation in 1978 and 1983. In general, the fit of the equation is better in 1983 than in 1978, as shown by the decrease from .910 to .868 in Wilks' lambda.

Table 3.2 shows that physician's age has a negative and significant relationship with Medicaid participation in both 1978 and 1983. Agreement that society has a responsibility to ensure availability of medical care also has a strong positive relationship to Medicaid participation in both years. Board certification was not significant in the 1978 equation, but was positively related to participation in 1983, contrary to what the two-market theory would predict. Unmeasured state-specific factors may be responsible for this finding: Georgia and Pennsylvania, with the lowest proportions of board-certified pediatricians, also have the highest proportions of nonparticipation. The other two personal and practice characteristics in the model, place of medical school graduation and nonphysician personnel costs, have no significant effect on Medicaid participation.

Turning next to service area characteristics, we see that only per capita income was significant in the 1978 analysis. In the 1983 equation, only the physician/population ratio was significant. Contrary to theoretically-derived expectations, the greater the supply of physicians relative to the population, the <u>less</u> likely a physician is to participate in Medicaid.

Of the two Medicaid policy variables used in the equation, only the RMPI was significant in 1978. In 1983, however, both the RMPI and the ratio of reimbursement to fees were significant in the expected direction at the $p<.001$ level.

To sum up briefly, the model explains more of the variance in 1983 than it did in 1978. Medicaid nonparticipants tend to be older and to have less liberal attitudes about society's responsibility to provide medical care to the poor. In 1983, participants were significantly more likely than nonparticipants to be board-certified, a finding not easily reconciled with the two-market theory but possibly attributable to unmeasured state-specific factors. Participants tended to practice in areas with lower per capita incomes in 1978, but this variable was not significant in 1983. In 1983, the physician/population ratio was significant, although not in the expected direction: pediatricians in areas with relatively more physicians were less likely to have Medicaid patients. Both the ratio of reimbursement to fees and the RMPI show large significant positive coefficients in 1983; in 1978, only the RMPI was significant.

Panel Analysis

In this section we analyze changes in pediatricians' decisions to participate in Medicaid. The analysis is necessarily limited to the panel--that is, to the 528 pediatricians for whom we have both 1978 and 1983 data on Medicaid participation. The multivariate analysis is further restricted to the 517 pediatricians for whom we have data for all the independent variables in the model.

Descriptive Statistics

Among the pediatricians in the panel, the proportion participating in Medicaid dropped from 86 percent to 81 percent between 1978 and 1983, a decline that is statistically significant at the .001 level. The 5 percent decline is the net effect of two types of changes: (1) decisions made by

nonparticipants in 1978 to participate in 1983; and (2) decisions made by participants in 1978 not to participate in 1983. The different components of the change in participation are shown in Table 3.3. Of the 452 pediatricians in the panel who were participants in 1978, almost 9 percent (40) had decided not to participate by 1983. Of the 76 pediatricians who were nonparticipants in 1978, 21 percent (16) had decided to participate in 1983. If these transition rates were to continue indefinitely, the proportion of pediatricians in the panel who participate in Medicaid would stabilize at 71 percent.

Table 3.4 shows the change in the proportion of pediatricians participating in Medicaid each of the thirteen study states. Although there is much variation, most states show a slight decline in the proportion of participating pediatricians. The only state in which the change was statistically significant was Pennsylvania. In Pennsylvania, the proportion of participating pediatricians dropped from 84 percent to 63 percent for a net decrease of 21 percentage points, more than twice the decrease of any other state. There were also relatively large decreases in California (almost 10 percentage points) and Colorado (9 percentage points). Nebraska was the only state in which the proportion participating increased, by 6 percentage points.

As stated above, changes in the proportion of pediatricians participating in Medicaid between 1978 and 1983 can be divided into two components -- decisions by participants in 1978 not to participate by 1983; and decisions by nonparticipants in 1978 to participate by 1983. In the following analysis, each of these decisions will be examined separately.

Decisions made by Participants in 1978: Zero-order Relationships

Table 3.5 describes pediatricians who were participants in 1978, showing the 1978 and 1983 values of the independent variables in the model for two groups of pediatricians: those who decided not to participate by 1983, and those who continued their participation. By comparing these two groups we can determine which factors are correlated with their decisions to continue or to stop participating in Medicaid.

The first five independent variables shown in the Table 3.5 are personal and practice characteristics of the pediatricians. (Note that 1983 data are not reported for either age or place of graduation. This information is redundant since each physician aged five years between the two surveys and the place of graduation from medical school remained unchanged.) The pediatricians participating in 1978 who were most likely to remain participants in 1983 were those who were young, board-certified, and paying lower salaries for nonphysician personnel. Becoming a new nonparticipant was not significantly related with either board certification, or agreeing that society has a responsibility to provide health care to the poor.

The next four independent variables describe the service area characteristics of the pediatrician's practice. The pediatricians participating in 1978 who were most likely to remain participants in 1983 were those who practiced in areas with low per capita income in 1978 and those who practiced in nonmetropolitan areas in 1983. The data also show that the proportion of pediatricians participating in Medicaid was somewhat higher in

areas with relatively large Medicaid populations and low physician to population ratios, although the difference for the percent of the population on Medicaid was not significant for either year and the difference for per capita income was significant in 1983 only.

The two remaining variables on Table 3.5 describe policy characteristics of the state in which the physician practices. The pediatricians who still participated in Medicaid in 1983 were more likely to be in states with high Medicaid reimbursements (relative to current usual fees) in both 1978 and 1983 and in states with relatively low values of the RMPI in 1983. However the data show that the decrease in the ratio of Medicaid reimbursements to current usual fees was less and the increase in the value of the RMPI was greater for those pediatricians who decided not to participate in 1983. Although only zero-order relationships, these data do not support the hypothesis that increasing the generosity of Medicaid policies fosters pediatricians' participation in Medicaid.

Decisions made by Medicaid Participants in 1978: Multivariate Analysis

In this section, we use multivariate analysis to identify factors which caused pediatricians who were Medicaid participants in 1978 to become nonparticipants in 1983. Discriminant analysis was used to identify factors most influential to pediatricians in making these changes. Table 3.6 reports the results of the analysis in which the 1978 values of the independent variables (and the changes in these variables between 1978 and 1983) are used to discriminate between pediatricians who continued their participation in 1983 and those who became nonparticipants. This analysis tells us which pediatricians are most likely to change their minds about participating in Medicaid.

The first column of Table 3.6 shows the first discriminant analysis equation for the pediatricians who were Medicaid participants in 1978. The analysis shows that the pediatricians who continued their participation in 1983 were more likely to be young, certified, and to practice in states with high Medicaid reimbursements relative to current fees. Note, however, that this equation does not describe what effect changes in the independent variables might have on the extent of participation. This is described in the remaining columns of the table.

An important feature of panel analysis is that it allows the researcher to determine whether changes in the independent variables have any effects on changes in the dependent variable -- for example, whether more generous Medicaid policies have any effect on one's Medicaid participation. Thus, after completing the discriminant analysis shown in the first column, changes in the independent variables between 1978 and 1983 were entered into the discriminant analysis one at a time. Two change variables had statistically significant effects on change in Medicaid participation. In the second column of Table 3.6 we see that changes in whether the pediatrican lived in a metropolitan area had a significant effect on pediatricians continuing their participation in 1983, with pediatricians moving from nonmetropolitan to metropolitan areas likely to discontinue their participation. In the third column we see that pediatricians who practiced in states in which the value of the RMPI increased were more likely to stop participating, the reverse of what we would hypothesize. The fourth column of Table 3.6 shows that both change

variables had significant effects when entered into the discriminant analysis simultaneously.

Decisions made by Nonparticipants in 1978: Zero-order Relationships

Table 3.7 presents data on pediatricians who did not participate in 1978. The first two columns present the mean values of the variables in the model for two categories of these pediatricians -- those who were still not participating in 1983 and those who had begun to participate. By comparing data in these two columns, we can identify factors associated with either beginning to participate, or continuing nonparticipation in Medicaid.

The nonparticipants in 1978 who began to participate by 1983 were significantly more likely to be foreign medical graduates. There were no significant differences among either the other personal characteristics, or any of the service area characteristics. The pediatricians most likely to become "new" participants were significantly more likely to be in states with high RMPI values. However, there were no significant differences with respect to the ratio of Medicaid reimbursement to current usual fees. The lack of significance of these differences is due in part to the small size of the sample.

Decisions made by Nonparticipants in 1978: Multivariate Analysis

In this section, multivariate analysis is used to identify factors associated with pediatricians who were nonparticipants in 1978 becoming participants in 1983. Once again, discriminant analysis was used to identify the most influential factors. Table 3.8 reports the results of the discriminant analysis in which the 1978 values of the independent variables (and the changes in these variables between 1978 and 1983) are used to discriminate between pediatricians who became new participants in 1983 and those who remained nonparticipants.

Table 3.8 shows the discriminant analysis equation for the pediatricians who were nonparticipants in 1978. None of the variables in the model had a significant effect on the decision to become a new participant in Medicaid. After completing this discriminant analysis, changes in the independent variables between 1978 and 1983 were entered into the discriminant analysis one at a time. None of the change variables had an effect that was statistically significant, partly as a result of the small sample size.

Discussion

Concerns about low pediatrician participation in Medicaid are not strongly substantiated by the empirical findings just presented. Indeed, the overwhelming majority of pediatricians participate in state Medicaid programs. This was true in 1978 and continues to be the case in 1983. We note, however, that participation varies considerably from state to state. In addition, for the sample as a whole, significant declines in participation have occurred between 1978 and 1983, suggesting that pediatricians' Medicaid participation is somewhat responsive to changes in their practice environment. However,

these declines are not occurring uniformly across the states. This suggests that a few states have particular problems attracting and retaining physicians in the program. Analysis of the causes of these state-specific problems and strategies for their resolution are taken up in Chapter 6.

Although relatively few in number, who are the nonparticipants? In general, the 1983 cross-sectional analysis indicates that they are older, less likely to be board-certified, and less liberal in their attitudes about the role of government in ensuring the poor's access to health care. In general, measures of demand did not have a significant influence on being a nonparticipant and nonparticipants are generally practicing in areas that have more physicians. We expected such competitive conditions to bring about more Medicaid participation among pediatricians, but our analysis suggests that this is not the case. Indeed, it seems that more competitive conditions are associated with nonparticipation.

Although most pediatricians are participating in Medicaid, there is some reason to be concerned about observed declines between 1978 and 1983, especially in particular states. There are many factors associated with nonparticipation that are beyond the grasp of state policymakers--such as the age and personal attitudes of the physicians. These factors cannot be directly altered by state policies. However, the analysis gives reason to believe that state policymakers do have means at their disposal with which to encourage participation. In general, nonparticipants are found to be practicing in states with lower Medicaid reimbursement (relative to the physicians' fees), and in states with relatively less generous Medicaid policies, as measured by the Revised Medicaid Program Index [1]. There is reason to believe that raising reimbursement and expanding the generosity of the state programs would foster a greater degree of participation among pediatricians.

From the panel analysis we see that Medicaid participation is not static; pediatricians are continually changing their status vis-a-vis the program. As a result of such changes, we observe a significant overall decline in participation in the panel between 1978 and 1983. Such changes in participation status, if they continued indefinitely, would result in 30 percent of the panel being nonparticipants. This is almost twice the amount of nonparticipation that was evident in the panel in 1978 when 86 percent of the pediatricians were found to be participants. We note, however, that the changes in participation status are not distributed evenly across the states; Pennsylvania, California, and Colorado each had rather large net decreases in participation during this period.

Although the descriptive panel analysis indicates significant overall declines in Medicaid participation between 1978 and 1983, the multivariate panel analysis adds relatively little to our understanding of these changes. We look first at the pediatricians participating in 1978 and find that those most likely to have discontinued participation had moved into metropolitan areas between 1978 and 1983. In addition, those discontinuing their participation were in states where the RMPI increased between 1978 and 1983. The latter finding is not easily explained by our model, and is attributable to the fact that the greatest decrease in participation occurred in

Pennsylvania, a state in which the RMPI increased between 1978 and 1983. For

nonparticipants in 1978, none of the independent variables in the multivariate panel analysis were significantly associated with participation.

In summary, then, we find that most pediatricians are continuing to participate in Medicaid. Fortunately, relatively few situational variables are associated with being a Medicaid nonparticipant. This means that there are relatively few immutable determining factors. Indeed, we find evidence that nonparticipants might well be persuaded to participate in Medicaid by more generous state Medicaid policies. In addition, we find that one's participation status was subject to change between 1978 and 1983, although the reasons for these changes are not easily explained by our multivariate model.

Table 3.1

Participants and nonparticipants: group means

Characteristic	1978 Participants (N=667)	1978 Nonparticipants (N=117)	1983 Participants (N=629)	1983 Nonparticipants (N=137)
Age	47.43	51.44	49.51	53.25
	p=.000		p=.002	
Place of medical graduation	13.64	7.69	12.35	7.52
	p=n.s.		p=n.s.	
Board certification	73.01	73.50	81.74	72.14
	p=n.s.		p=.0108	
Responsibility of society to ensure that medical care is available	83.51	71.79	84.29	72.45
	p=.0025		p=.0010	
Nonphysician personnel costs	880.23	880.61	1161.25	1168.26
	p=n.s.		p=n.s.	
Zip code area per capita income	3724.85	4095.78	10795.78	12014.96
	p=.020		p=.002	

Table 3.1 (continued)

Characteristic	1978 Participants (N=667)	1978 Nonparticipants (N=117)	1983 Participants (N=629)	1983 Nonparticipants (N=137)
Physicians per 100,000 county population	178.12	210.70	208.50	265.04
	p=.023		p=.000	
Proportion of zip code area population on Medicaid	7.52	6.14	7.43	6.07
	p=.009		p=.017	
Metropolitan practice	85.31	89.74	85.52	94.62
	p=n.s.		p=.0038	
Elapsed weeks between billing and payment of Medicaid claims	--	--	--	--
Ratio of Medicaid reimbursement to usual fees	0.767	0.774	0.737	0.715
	p=n.s.		p=.012	
RMPI	17.09	15.54	17.92	16.63
	p=.000		p=.000	

Table 3.2

Discriminant analysis:
participation and nonparticipation in 1978 and 1983

Independent Variable	Standardized Discriminant Coefficients 1978	1983
Age	-.357**	-.239*
Place of medical graduation	+.044	+.045
Board certification	-.050	+.241*
Responsibility of society to ensure that medical care is available	+.330**	+.379***
Nonphysician personnel costs	+.160	+.233
Zip code area per capita income	-.297*	-.240
Physicians per 100,000 county population	-.241	-.388***
Proportion of zip code area population on Medicaid	-.069	+.086
Metropolitan practice	-.112	-.158
Ratio of Medicaid reimbursement to usual fees	+.012	+.429***
RMPI	+.783***	+.642***
Wilks' Lambda	.910	.868
N	784	768

* -- p<.05
** -- p<.01
*** -- p<.001

Table 3.3

Changes in proportion of pediatricians participating in Medicaid between 1978 and 1983

		1983		
		Participant	Nonparticipant	TOTAL
1978	Participant	412 91.2%	40 8.8%	452 100.0%
	Nonparticipant	16 21.1%	60 78.9%	76 100.0%
	TOTAL	428 81.1%	100 18.9%	528 100.0%

Table 3.4

Change in proportion of pediatricians participating in Medicaid between 1978 and 1983, by state

	N	Proportion participating in 1978	Proportion participating in 1983	Change in proportion participating 1978-1983
Total	528	85.6%	81.1%	-4.5% ***
California	31	100.0	90.3	-9.7
Colorado	33	100.0	90.9	-9.1
Georgia	64	40.6	40.6	0.0
Indiana	48	89.6	87.5	-2.1
Iowa	29	100.0	100.0	0.0
Maryland	46	97.8	91.3	-6.5
Massachusetts	39	97.4	94.9	-2.6
Nebraska	16	93.8	100.0	+6.2
New York	33	87.9	81.8	-6.1
Oklahoma	40	97.5	92.5	-5.0
Pennsylvania	38	84.2	63.2	-21.0 *
Tennessee	61	83.6	82.0	-1.6
Texas	50	82.0	80.0	-2.0

* -- significant at .05 level
** -- significant at .01 level
*** -- significant at .001 level

Table 3.5

Change in the means of the characteristics of pediatricians who were Medicaid participants in 1978

Characteristic	Total (N=443)	Medicaid non-participants in 1983 (N=39)	Medicaid participants in 1983 (N=404)	Significance of difference between non-participants and participants
Age (1978)	47.5	51.2	47.1	.031
Place of medical graduation (1978)	13.5	10.3	13.9	n.s.
Board certification				
1978	74.5	59.0	76.0	.045
1983	84.2	69.2	85.6	.039
Responsibility of society to ensure care				
1978	84.0	87.2	83.7	n.s.
1983	83.8	74.4	84.7	n.s.
Nonphysician personnel costs				
1978	878.2	915.8	874.6	.012
1983	1163.7	1211.7	1159.1	.005
Zip code area per capita income				
1978	3747.6	4099.1	3713.7	.017
1983	10921.9	11717.3	10845.1	n.s.
Physicians per 100,000 county population				
1978	176.9	202.8	174.4	n.s.
1983	210.3	242.6	207.1	n.s.

Table 3.5 (continued)

Change in the means of the characteristics of pediatricians who were Medicaid participants in 1978

Characteristic	Total (N=443)	Medicaid non-participants in 1983 (N=39)	Medicaid participants in 1983 (N=404)	Significance of difference between non-participants and participants
Proportion of zip code area population on Medicaid				
1978	7.3	5.9	7.4	n.s.
1983	7.1	5.7	7.2	n.s.
Metropolitan practice				
1978	85.8	89.7	85.4	n.s.
1983	86.5	94.9	85.6	.024
Ratio of Medicaid reimbursement to usual fees				
1978	76.6	72.0	77.0	.020
1983	73.9	70.3	74.3	.021
RMPI				
1978	17.0	16.2	17.1	.019
1983	17.9	18.3	17.8	n.s.

Table 3.6

Unweighted discriminant analysis of Medicaid participation in 1983, panel physicians

Independent variable	Standardized discriminant coefficients			
Values in 1978	(1)	(2)	(3)	(4)
Age	-.483 *	-.453 *	-.474 *	-.445 **
Place of medical graduation	+.199	+.194	+.185	+.181
Board certification	+.569 **	+.529 **	+.530 **	+.491 **
Responsibility of society to ensure that medical care is available	-.155	-.137	-.138	-.120
Nonphysician personnel costs	-.174	-.170	-.131	-.129
Zip code area per capita income	-.119	-.076	-.136	-.070
Physicians per 100,000 county population	-.096	-.023	-.063	-.070
Proportion of zip code area population on Medicaid	+.176	+.190	+.195	+.210
Metropolitan practice	+.051	-.049	-.012	-.090
Ratio of Medicaid reimbursement to usual fees	+.480 *	+.447 *	+.327	+.294
RMPI	+.355	+.302	-.005	-.054
Change 1978 - 1983				
/\Metropolitan practice	----	-.370 *	----	-.377 *
/\RMPI	----	----	-.491 *	-.501 *
Wilks' Lambda	.933	.924	.924	.914
N	443	443	443	443

Table 3.7

Change in the means of the characteristics of pediatricians who were Medicaid nonparticipants in 1978

Characteristic	Total (N=74)	Medicaid non-participants in 1983 (N=58)	Medicaid participants in 1983 (N=16)	Significance of difference between non-participants and participants
Age (1978)	51.4	50.4	54.8	n.s.
Place of medical graduation (1978)	5.4	6.9	0.0	.044
Board certification				
1978	74.3	74.1	75.0	n.s.
1983	77.0	79.3	75.0	n.s.
Responsibility of society to ensure care				
1978	72.9	75.9	62.5	n.s.
1983	69.0	50.0	64.9	n.s.
Nonphysician personnel costs				
1978	870.9	864.5	893.8	n.s.
1983	1140.5	1130.2	1177.9	n.s.
Zip code area per capita income				
1978	4119.2	4251.0	3641.3	n.s.
1983	11858.4	12037.9	11207.8	n.s.
Physicians per 100,000 county population				
1978	219.0	220.2	214.8	n.s.
1983	265.8	266.7	262.2	n.s.

Table 3.7 (continued)

Change in the means of the characteristics of pediatricians who were Medicaid nonparticipants in 1978

Characteristic	Total (N=443)	Medicaid non-participants in 1983 (N=39)	Medicaid participants in 1983 (N=404)	Significance of difference between non-participants and participants
Proportion of zip code area population on Medicaid				
1978	5.6	6.7	5.8	n.s.
1983	6.2	6.0	6.2	n.s.
Metropolitan practice				
1978	91.4	93.8	91.9	n.s.
1983	94.8	93.8	94.6	n.s.
Ratio of Medicaid reimbursement to usual fees				
1978	79.8	74.1	78.6	n.s.
1983	72.7	71.8	72.5	n.s.
RMPI				
1978	14.9	15.9	15.1	n.s.
1983	15.6	17.3	15.9	.037

Table 3.8

Unweighted discriminant analysis of Medicaid participation in 1983, panel physicians

Independent variable	Standardized discriminant coefficients
Values in 1978	
Age	+.349
Place of medical graduation	-.228
Board certification	+.113
Responsibility of society to ensure that medical care is available	-.396
Nonphysician personnel costs	+.228
Zip code area per capita income	-.909
Physicians per 100,000 county population	+.013
Proportion of zip code area population on Medicaid	-.252
Metropolitan practice	+.096
Ratio of Medicaid reimbursement to usual fees	-.412
RMPI	+.522
Wilks' Lambda	.798
N	74

Notes

1. While the multivariate analysis suggests that nonparticipation is associated with relatively lower RMPI scores, this relationship does not necessarily hold in each of the thirteen states. For example, we note that relatively low participation in Pennsylvania is associated with relatively high RMPI scores. In addition, decreases in participation between 1978 and 1983 are associated with increases in the RMPI. These unexpected relationships are discussed further in the state level analysis presented in Chapter 6.

CHAPTER 4

Extent of Medicaid Participation

Introduction

The preceding chapter examined factors influencing the decision to participate in Medicaid. Pediatricians who decide to accept Medicaid patients must also decide how much of their practice they are willing to devote to Medicaid. This chapter examines the extent of participation, defined here as the proportion of a physician's patients whose care is financed by Medicaid. Ordinarily, we will consider the adjusted extent of participation, or the extent of participation among Medicaid participants only.

In this chapter we first discuss trends in the extent of participation between 1978 and 1983. Following this, we set the context for the multivariate analysis with descriptive statistics showing associations between extent of participation and the independent variables in the model. Third, we present the regression analyses of the determinants of extent of participation for the 1978 sample and the 1983 sample. These two cross-sectional analyses enable us to examine how the determinants of extent of participation have changed between 1978 and 1983. Finally, a panel analysis of changes in extent of participation between 1978 and 1983 is presented and all findings are discussed.

Descriptive Statistics

In both 1978 and 1983, the extent of participation among participating pediatricians varied widely, ranging from 1 percent to 99 percent. However, 60 percent of all Medicaid participants had 10 percent or less of their patient load covered by Medicaid (see Figure 4.1). The comparable figure for 1978 is 57 percent. Among physicians who participated in Medicaid, the average percent of patient load covered by Medicaid fell from almost 16 percent in 1978 to almost 15 percent in 1983 [1]. There is, however, significant interstate variation in average extent of participation. In 1983, for instance, average extent of participation ranged from 9 percent in Texas to 24 percent in California. These differences are discussed at greater length in Chapter 6.

Table 4.1 summarizes the findings of seven earlier studies of physician participation in Medicaid. Despite their divergent sampling and data collection techniques, these studies report similar proportions of pediatricians' patients covered by Medicaid, ranging from almost 11 percent to almost 16 percent.

Zero-Order Relationships

We first examine physicians' personal and practice characteristics, including age, place of medical school graduation, board certification, attitudes about society's responsibility for health care, and nonphysician

personnel costs. In both 1978 and 1983, age was negatively correlated with extent of Medicaid participation, indicating that younger physicians tended to take more Medicaid patients (see Table 4.2). However, the strength of the relationship had diminished somewhat by 1983 and was not statistically significant. In addition, nonphysician personnel costs are inversely and significantly related to extent of participation, and for this relationship the size of the coefficient has increased. Extent of participation is greater among foreign medical graduates (see Table 4.3). However, extent of participation did not differ significantly with respect to physicians' board certification status or attitudes about society's responsibility for ensuring access to health care.

Second, we turn to service area characteristics: per capita income, size of the Medicaid population, supply of physicians, and urban/rural practice. There is an inverse relationship between extent of participation and the variables per capita income and and physicians per 100,000 population (see Table 4.2). As expected, size of the Medicaid population is positively related to extent of participation. As measured by the correlation coefficients, all of these relationships have grown stronger over the five-year period between 1978 and 1983. In both 1978 and 1983, the extent of participation was significantly higher in non-metropolitan areas than in metropolitan areas.

Finally, the state Medicaid policy variables all have the expected relationship to extent of participation. The log of number of weeks for payment and extent of participation are inversely related, and this relationship is stronger for 1983 than for 1978 (see Table 4.2). The ratio of Medicaid reimbursement to usual fees and the Revised Medicaid Program Index (RMPI) are both positively related to extent of participation, although both coefficients are smaller for 1983 than for 1978 and the coefficient for reimbursement is not statistically significant in 1983.

These zero-order relationships suggest ways in which situational and policy characteristics are related to the percent of physicians' patient load covered by Medicaid. Many of these variables may be interrelated, however, and zero-order associations do not control for that possibility. A multivariate analysis is needed to determine the contribution of each variable while controlling for the effects of the others. For extent of participation, a continuous variable, multiple regression is used.

Multivariate Analysis: 1978 and 1983

Table 4.4 displays regression coefficients for the log of the extent of participation. Unstandardized coefficients are used for comparisons between 1978 and 1983 since they are not influenced by the composition of the population, which may differ between the two years.

Looking first at personal and practice characteristics, we see that in both 1978 and 1983, place of medical school graduation is significantly related to extent of participation, with foreign medical graduates likely to have a higher percent of their patient load covered by Medicaid. No other personal and practice characteristics were significant in either year.

Several service area characteristics show a significant association with extent of Medicaid participation. In both years per capita income was negatively related to extent of participation. Similarly, the estimated proportion of zip code population covered by Medicaid was significant and positive in both years. Contrary to expectations, the number of physicians per 100,000 population was negatively related to extent of Medicaid participation; this relationship was statistically significant in 1983. Moreover, while practicing in a metropolitan area had no significant effect in 1978, the 1983 data show that practicing in a metropolitan area had a negative effect on extent of participation. This result, too, is contrary to what the two-market theory predicted.

Considering the state policy variables, we see that in 1983 as in 1978, all three have a significant effect on extent of Medicaid participation. The log of the number of weeks for Medicaid payment is negative and significant in both years, with a slightly stronger effect in 1983. While the coefficient for the RMPI is smaller in 1983 than in 1978, it is still significant at $p<.001$, with a positive relationship to extent of participation. The ratio of Medicaid reimbursement to fees is also significant and positive, although the level of significance fell between 1978 and 1983.

To sum up briefly, the regression model explains more of the variance in 1983 than in 1978, as shown by the increase in R-squared from .274 to .351. Service area and state Medicaid policy characteristics were the most important for explaining extent of Medicaid participation in both 1978 and in 1983. With the exception of place of medical school graduation, none of the personal characteristics had a significant relationship to extent of participation. Nonphysician personnel costs were significant in neither 1978, nor 1983. Per capita income and the estimated percent of population covered by Medicaid, measures of demand by Medicaid patients, have a direct effect on extent of participation in the predicted direction.

The influence of the three state policy variables is also evident. Lower collection costs, higher levels of reimbursement, and positive professional incentives appear to make Medicaid participation more attractive to physicians. However, the negative effects of the supply of physicians and of metropolitan practice on extent of Medicaid participation are more puzzling, and suggest that a modification of the two-market theory is in order. This question is taken up in more detail in the concluding section of this chapter.

These findings are similar to those of other researchers. Studies by Sloan et al. [5], Held et al. [6], and Hadley [9] have previously examined the determinants of extent of Medicaid participation. In Sloan's analysis of what we have called adjusted extent, the significant variables were the Medicaid fee schedule, the percent of claims returned for additional work, the estimated proportion of the population covered by Medicaid, place of medical graduation, age, and one of four medical specialty variables. Held et al. found that Medicaid reimbursements, the physician population ratio, percent of population in poverty, region, location of practice, percent of the population under five years of age, and board certification were related to extent of participation. Hadley's study, which is least similar in design to ours, found the significant variables to be Medicaid revenue per patient, the ratio of physicians to Medicaid eligibles, physicians' private and Medicare revenues, and size of county population. In general, despite many differences in research design and analysis, our findings are consistent with the results

of these studies regarding the role of variables such as place of medical graduation, relative size of the Medicaid population, and policy variables. While all three find negative effects for the physicians per population variable, only Held et al. previously found this variable to be significantly related to extent of participation.

Panel Analysis

In this section we analyze the change in the extent of Medicaid participation for individual pediatricians between 1978 and 1983. It is important to recall that this part of the analysis is limited to the 528 pediatricians in the panel -- i.e., the pediatricians for whom we have both 1978 and 1983 data on the extent of their Medicaid participation.

Descriptive Statistics

The average extent of participation for all 528 pediatricians in the panel declined from 12 percent to 11 percent between 1978 and 1983 [10]. This change is significant at the $p < .05$ level. Some of the change in the extent to which pediatricians participate in Medicaid is related to changes in their decision as to whether to participate in Medicaid at all. Table 4.5 shows how changes in this decision affect the average extent of participation. For the 412 pediatricians who were Medicaid participants in both 1978 and 1983, there was a statistically insignificant decrease in average extent of participation slightly from 15 percent to 14 percent. For the 16 pediatricians who were "new participants" in 1983, the average extent of participation increased from none to 5 percent. And for the 40 pediatricians who were "former participants" in 1983, the average extent of participation decreased from 5 percent to none. These data indicate that the changes in the decision to participate are mostly likely to occur among pediatricians with <u>low</u> extents of participation.

The remaining part of the panel analysis is limited to the 412 pediatricians who were Medicaid participants in both 1978 and 1983. Even though the average extent of participation was fairly stable between 1978 and 1983, there was a great deal of fluctuation in the extent of participation among the individual pediatricians. Figure 4.2 shows the frequency distribution of the change in the extent of participation for pediatricians who were Medicaid participants in both 1978 and 1983. The change in the extent of participation ranged from a decrease of 55 percent to an increase of 45 percent. Of the 412 pediatricians, 106 (26 percent) reported no change in their participation between 1978 and 1983; 129 (31 percent) reported that they increased the extent of their participation; and 177 (43 percent) reported that their extent of Medicaid participation decreased.

Among the pediatricians who increased their Medicaid practices, the extent of participation increased from almost 12 percent to 20 percent (see Table 4.6). Among the pediatricians who decreased their Medicaid practices, the average extent of participation decreased from 19 percent to 11 percent. The pediatricians who had reported no change in the size of their Medicaid practice had an average extent of participation of 11 percent in both 1978 and 1983.

Table 4.7 shows the change in the extent of participation for each of the thirteen study states. There were large decreases in the average extent of participation in California, Oklahoma, Massachusetts, and Maryland and relatively large increases in New York and Nebraska. However, only the changes in California and Oklahoma were statistically significant.

Change in Extent of Participation: Zero-order Relationships

Tables 4.8 and 4.9 show how changes in the extent of Medicaid participation correlate with the different variables in the model. Table 4.8 shows the amount of change in the various categories of the discrete variables of the model. Although there is a lot of variation among the various categories, there is considerably less variation in the change in the extent of Medicaid participation. The average extent of participation for pediatricians in non-metropolitan areas rose from 18 percent to 19 percent for an increase of 1 percentage points. In all of the other categories, the average extent of participation decreased by 0.4 percentage points to 1.3 percentage points.

Table 4.9 shows how the change in the extent of participation correlates with the continuous variables in the model. The table shows that the increase in the extent of Medicaid participation was significantly higher (that the decrease was significantly smaller) for pediatricians who were older, who practiced in areas with low salaries for non-physician personnel, and who participated in Medicaid programs that gave relatively prompt reimbursements and had relatively high values for the RMPI.

Multivariate Panel Analysis

The panel analysis for the change in the extent of participation between 1978 and 1983 is presented in Table 4.10. The first column of the table shows how the 1978 values of the independent variables affected the change in participation between 1978 and 1983. Six independent variables have significant effects: AGE78, FMG78, INCR78, MEDPOP78, METRO78, and WKSLOG78. Thus, the pediatricians most likely to increase the extent of the Medicaid participation (or least likely to decrease) are those who, in 1978, were older, foreign medical graduates, in low income areas, in areas with large Medicaid populations, and who received relatively prompt Medicaid reimbursements. (Note that this equation does not describe what effect changes in the independent variables might have on the extent of participation. This is described in the remaining columns of the table.)

In the remaining columns of Table 4.10, changes in the independent variables are entered into the regression analysis. Each of these change variables were entered separately into the analysis. Only four of them proved to be significant in their effects on the change in the extent of Medicaid participation: /\SALR, /\INCR, /\MEDPOP, and /\RMPI. Thus, the pediatricians most likely to increase their extent of Medicaid participation (least likely to decrease) were those who:

- had the smallest increases in the cost of non-physician personnel;

- practiced in neighborhoods that became poorer (or moved their practice to poorer neighborhoods);

- practiced in neighborhoods in which the Medicaid population increased (or moved to neighborhoods with larger Medicaid populations);

- practiced in states in which the RMPI increased.

These four change variables are entered into the equation simultaneously in the final column of Table 4.10. Only ΔINCR is found to have a significant effect on the change in the extent of Medicaid participation.

Discussion

The data presented in the preceding chapter suggested that the overwhelming majority of pediatricians participated in the Medicaid program in 1978 and still do in 1983. This leads us to conclude that the pediatricians' decisions as to how much to participate in the program have the most important bearing on the access of low income children to pediatric care. A pediatrician may "accept" Medicaid patients but, in fact, have very few Medicaid patients in his or her practice.

It is difficult to address the extent of pediatrician participation in Medicaid that might be considered desirable from a public policy standpoint. It does not make sense to state an arbitrary objective such as: 15 percent of each pediatrician's practice "should" be composed of Medicaid patients. The actual extent of participation will, of necessity, always be an outcome of a complex set of factors including demand, supply, and economic and professional incentives. Broader economic conditions such as recession or unemployment, as well as the generosity of Medicaid program eligibility, will affect the size of the overall demand for services from the Medicaid-eligible population. The supply of providers in a community will also inevitably affect the way in which the Medicaid-eligibles are distributed among providers.

It is important to note, however, that both the demand and the supply factors can be manipulated through public policy. They are affected, for example, by state-set welfare eligibility levels, policies affecting the numbers of physicians being trained and their practice location choices, and policies regulating the entrance of foreign medical graduates into the U.S. health care market. Economic and professional incentives also have a very direct impact on the extent to which a physician chooses to participate in the program and these too are subject to manipulation through public policy. Thus, while it may be impossible to state the desired participation of physicians in actual percentage terms, it is important to observe that this participation is very much a function of public policy.

It is our contention that the optimal extent of participation among physicians is most likely to come about in a policy environment which does not directly <u>discourage</u> participation. Extent of participation ought not be limited by conscious decisions in response to policy attributes such as low reimbursement and high collection costs which create discouraging negative economic and professional incentives. However, the analyses presented in this

chapter suggest that we must also be aware of other factors affecting participation, most notably issues of physician supply, physician distribution, and competition.

When we compare the 1978 and 1983 models of extent of participation we note first that the economic and professional incentives created by Medicaid policies continue to influence extent of participation. Positive economic incentives such as relatively higher reimbursement and lower collection costs are associated with greater participation, as are the positive professional incentives represented by relatively higher RMPI scores. We note, however, that while these coefficients are significant in both years, their magnitude has diminished. This suggests that these factors are somewhat less influential in 1983, relative to the other variables in the model, than was the case in 1978.

The effects of the service area characteristics, by comparison, are stronger in 1983 than in 1978. These factors, measuring demand and supply, are somewhat more influential than was previously the case. However, the direction of the effects is not necessarily what the two market theory would predict. It does appear, as would be predicted, that physicians practicing in areas with relatively more Medicaid-eligibles are likely to have relatively more Medicaid patients. However, where the physician supply is the greatest (and, in particular, in metropolitan areas) pediatricians tend to have relatively <u>fewer</u> Medicaid patients. This finding is consistent with previous research, it held true in the 1978 study, and it is an even stronger finding in the 1983 replication. However, it is <u>not</u> what the two market theory would predict.

The two market theory holds that as physician supply increases, and competition therefore increases among physicians for privately paying patients, physicians will be able to attract fewer and fewer of the "desirable" non-Medicaid patients into their practices. As a result, the theory predicts, physicians will, of necessity, dip further and further into the Medicaid market. We have consistently observed in the empirical literature, however, that this simply is not the case. Rather, a relatively larger physician supply is associated with relatively fewer Medicaid patients.

Why extent of participation does not appear to increase as physician supply increases is a matter of theory-building. Clearly, the two market theory is in need of some revision. In future research we hope to examine this matter more closely, considering notions of "niche specialization" as an alternative theoretical perspective for explaining physician behavior vis-a-vis Medicaid patients under conditions of increasing physician supply and competition. It seems likely, for example, that areas dense with physicians also tend to be densely-supplied with other resources for the low income patient such as public health facilities, hospital outpatient departments, and emergency rooms. Failure to observe the behavior predicted by the two market theory may be a function of successful competition from these other resources. Indeed, these other resources may actually be more well-adapted and better-suited to compete successfully for these patients. For example, being uniquely able to engage in cost shifting of Medicaid losses to non-Medicaid patients (or to other public programs such as those under the block grants) may enable these other providers to market more aggressively to the low income patient. Similarly, offering twenty-four hour service may attract the low income parent

who cannot afford to lose work time in order to seek child health care. For their part, private physicians may seek to specialize in the non-Medicaid market, for instance by inducing demand in the private pay market, which may make it possible to avoid the Medicaid market despite the forces of increasing physician supply and competition. (Declining pediatrician incomes in recent years suggest that this response may not be working entirely to the satisfaction of physicians.)

These matters of theory-building will be taken up further in future research where we will bring other analyses to bear on the question of the impact of increasing physician supply and competition on physician participation in Medicaid. We seek for the moment only to consider the possible implications of the replication and further insights gained from the panel analysis. First, our analyses suggest that policymakers and Medicaid administrators can continue to foster greater participation in Medicaid through economic and professional incentives. Although the consequent increase in extent of participation may not be as great as it was in 1978, our analyses suggest that these remain viable tools for fostering greater participation among pediatricians.

Second, the replication suggests that policymakers and Medicaid administrators need to be aware of the perhaps unexpected consequences of the increasing physician supply and competition among health care providers, particularly in metropolitan areas. These factors apparently do not encourage greater participation in Medicaid among private office-based physicians. On the contrary, they appear to be associated with relatively less participation. The consequences of this observed relationship are not empirically verifiable with our data base; that is, we cannot adequately answer the question of where these children are getting their care if not in the practices of private physicians. It is possible, for example, that these children are receiving care in the practices of primary care physicians not included in this study such as family practitioners. However, it is also likely that these findings may imply one of two other things: either further movement towards a two-class system of health care in our nation (in which the non-Medicaid market is served by private providers and the Medicaid market is served by public providers), or further movement toward a system of care characterized by unequal access (in which the non-Medicaid market is able to obtain care while the Medicaid market is not).

The panel analysis provides a few additional insights into the trends in the extent of Medicaid participation among pediatricians. These insights are unique because previous empirical studies have used only cross-sectional data. We learn, for example, that 43 percent of the 412 panel members participating in both 1978 and 1983 decreased their Medicaid participation, on average from 19 to 11 percent. The largest decreases in average extent of participation were observed in California and Oklahoma. In addition, the analysis alerts us to changes in several factors which, at least for the panel, were associated with changes in participation. We note, for example, that pediatricians least likely to have decreased their Medicaid participation between 1978 and 1983 were those whose practice costs increased least during this period. Also, pediatricians practicing in areas with declining economic conditions were least likely to have decreased their participation. And finally, pediatricians practicing in states where professional incentives improved, as measured by increases in the Medicaid program index, were also least likely to have decreased their participation in the program. The findings of the

panel analysis emphasize that changes in participation between 1978 and 1983 were a function of changes in demand from the Medicaid-eligible population, as well as changing economic and professional incentives to participation.

Figure 4.1

Histogram of Extent of Participation, 1983

Table 4.1

Extent of participation in Medicaid: previous studies

Study	Data Source	Year	Participation Measure	Observed Level
Henderson, 1977 [2]	National probability sample, survey	1975	Proportion of Medicaid-eligible patients in the practice	
			(Total)	16.7%
			(Pediatrics)	12.2%
Jones, 1976 [3], 1977 [4], California	California Medical Association Members survey	1974	Average proportion of patient load under Medicaid	9.7%
		1977	Average proportion of patient load under Medicaid	10.7%
		1974	Average proportion of pediatrician's patient load under Medicaid	13.7%
		1977	Average proportion of pediatrician's patient load under Medicaid	13.7%
Sloan, Cromwell, & Mitchell, 1799 [5]	National probability sample, survey	1975	Proportion of a reference week's total visits rendered to Medicaid patients (all physicians)	10.3%
			(Pediatricians)	10.8%

Table 4.1 (continued)

nt of participation in Medicaid: previous studies

78	National probability sample, survey	1975	Average proportion of patient load under Medicaid (General/ Family Practice)	15.1%
			(Internal Medicine)	10.5%
			(Pediatrics)	15.6%
80	National probability sample, survey	1976	Average proportion of pediatrician's patient load under Medicaid	14.3%
			Average proportion of primary care physician's patients covered by Medicaid	13.3%
3	National probability sample, survey	1977, 1978	Percent of practice devoted to Medicaid (Medical specialties)	8.8%
			(Surgical specialties)	12.2%

Table 4.2

tes of extent of participation:
relation coefficients and p-values

	1978		1983	
	-.093	p=.0130	-.056	p=n.s.
	-.081	p=.0338	-.219	p=.0001
	-.331	p=.0001	-.461	p=.0001
	-.129	p=.0010	-.205	p=.0001
ea	+.343	p=.0001	+.386	p=.0001
	-.100	p=.0096	-.208	p=.0001
	+.092	p=.0023	+.052	p=n.s.
	+.233	p=.0232	+.177	p=.0001
	646		586	

d)

: previous studies

rage proportion of ient load under licaid (General/ ily Practice)	15.1%
ternal Medicine)	10.5%
diatrics)	15.6%
age proportion of atrician's patient under Medicaid	14.3%
age proportion of ary care physician's ents covered by caid	13.3%
nt of practice ed to Medicaid cal specialties)	8.8%
ical specialties)	12.2%

Table 4.3

Mean adjusted extent of participation by categorical variables

	1978			1983		
	N	Mean	p-value	N	Mean	p-value
Place of medical graduation						
USMG	557	13.9	p=.000	516	13.1	p=.000
FMG	89	29.9		70	28.2	
Board certification						
Not certified	173	19.0	p=n.s.	127	19.1	p=n.s.
Certified	473	15.0		459	14.2	
Responsibility of society to ensure that medical care is available						
Disagree	105	14.5	p=n.s.	87	13.2	p=n.s.
Agree	541	16.4		499	15.4	
Metropolitan practice						
Nonmetropolitan	96	19.4	p=.001	92	20.1	p=.000
Metropolitan	550	15.5		494	14.2	

Table 4.4

Regression analysis:
Log of extent of participation in 1978 and 1983

Independent Variable	Unstandardized Regression Coefficients 1978	1983
Age	-.004	-.003
Place of medical graduation	+.546***	+.574***
Board certification	-.068	+.020
Responsibility of society to ensure that medical care is available	+.155	+.046
Nonphysician personnel costs	+.0007	-.001
Zip code area per capita income	-.0002***	-.0001***
Physicians per 100,000 county population	-.0007	-.001**
Proportion of zip code area population on Medicaid	+.043***	+.047***
Metropolitan practice	-.171	-.346**
Log of weeks for payment	-.242***	-.285***
Ratio of Medicaid reimbursement to usual fees	+1.118**	+1.044*
RMPI	+.093***	+.071***
(Constant)	.305	2.018
R^2	.274	.351
N	646	591

* -- p<.05
** -- p<.01
*** -- p<.001

Table 4.4 (continued)

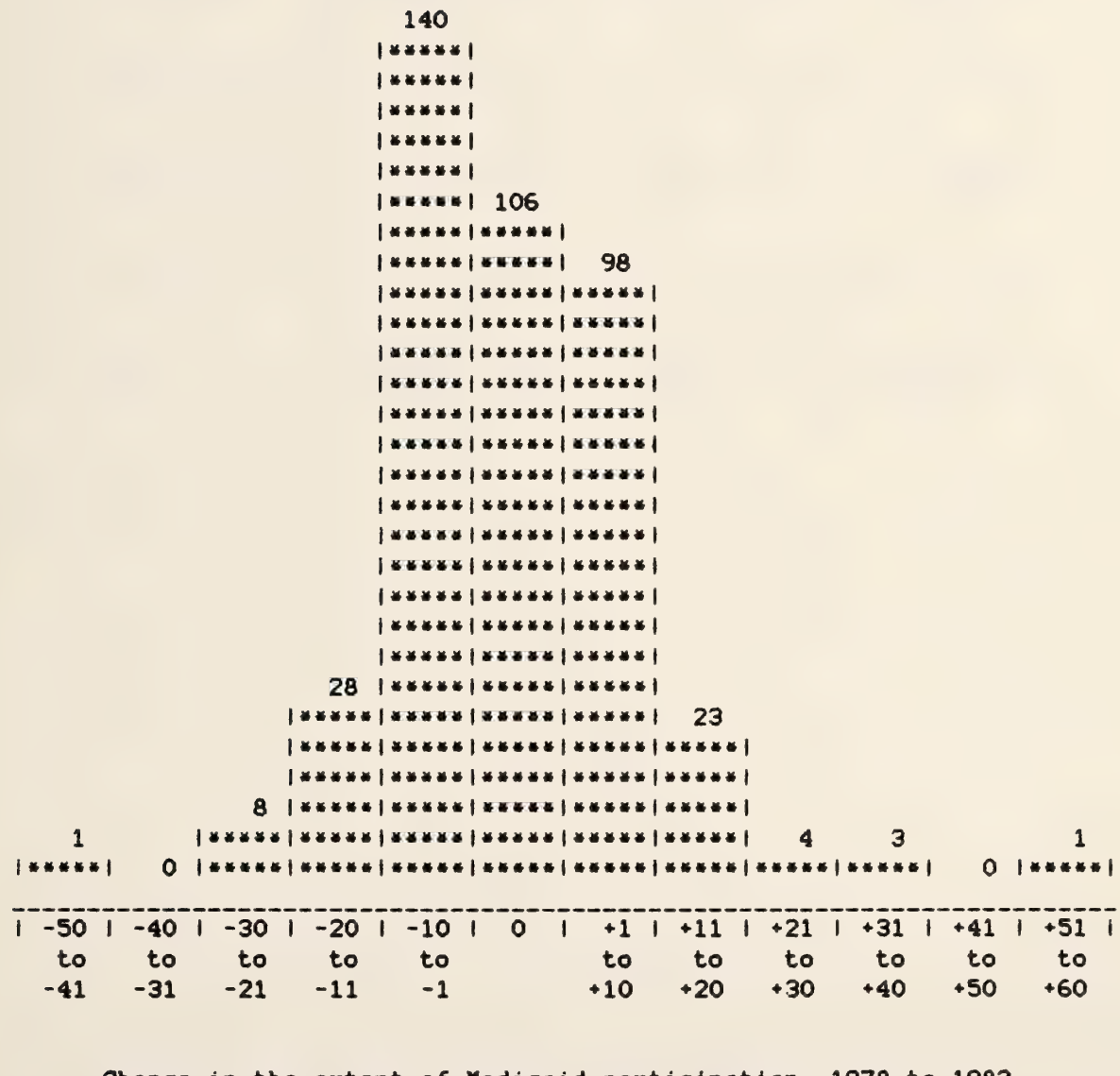
Regression analysis
extent of participation in 1978 and 1983

Independent Variable	Standardized Regression Coefficients 1978	1983
Age	-.042	-.028
Place of medical graduation	+.164***	+.165***
Board certification	-.026	+.007
Responsibility of society to ensure that medical care is available	+.050	+.014
Nonphysician personnel costs	+.070	-.061
Zip code area per capita income	-.197***	-.184***
Physicians per 100,000 county population	-.069	-.118**
Proportion of zip code area population on Medicaid	+.244***	+.272***
Metropolitan practice	-.053	-.104**
Log of weeks for payment	-.118***	-.137***
Ratio of Medicaid reimbursement to usual fees	+.116**	+.092*
RMPI	+.206***	+.123***
R^2	.274	.351
N	646	591

* -- p<.05
** -- p<.01
*** -- p<.001

Figure 4.2

Frequency distribution of the change in the extent of Medicaid participation among participating pediatricians between 1978 and 1983



Change in the extent of Medicaid participation, 1978 to 1983

Table 4.5

Changes in the extent of Medicaid participation between 1978 and 1983

		1983		
		Participant	Nonparticipant	TOTAL
1978	Participant	14.9%-->14.2% (412)	4.6%--> 0.0% (40)	14.0%-->12.9% (452)
	Nonparticipant	0.0%--> 5.4% (16)	0.0%--> 0.0% (60)	0.0%--> 1.1% (76)
	TOTAL	14.4%-->13.9% (428)	1.8%--> 0 0% (100)	12.0%-->11.2% (528)

Table 4.6

Proportion of Medicaid participants who increased, decreased, or maintained the same extent of participation between 1978 and 1983

Change in participation	N	Extent of Participation in 1978	Extent of Participation in 1983	Change in Extent of Participation 1978-1983
Total	412 (100.0%)	14.9%	14.2%	-0.7%
Increased extent of participation	177 (31.3%)	11.8%	20.7%	+8.9%
Same extent of participation	106 (25.7%)	11.3%	11.3%	0.0%
Decreased extent of participation	129 (43.0%)	19.4%	11.2%	-8.2%

Table 4.7

Change in the average extent of participation among participating pediatricians by state, 1978 to 1983

State	N	Extent of Participation in 1978	Extent of Participation in 1983	Change in Extent of Participation 1978--1983
Total	412	14.9%	14.2%	-0.7%
California	28	29.9	23.4	-6.5 **
Colorado	30	11.1	12.7	+1.6
Georgia	23	10.6	9.8	-0.8
Indiana	41	16.4	16.5	+0.1
Iowa	29	16.3	16.7	+0.4
Maryland	41	11.6	9.2	-2.4
Massachusetts	37	20.2	17.4	-2.8
Nebraska	15	12.5	14.3	+1.9
New York	26	18.8	21.1	+2.3
Oklahoma	36	15.7	11.3	-4.4 **
Pennsylvania	22	16.2	17.9	+1.7
Tennessee	47	9.0	10.7	+1.6
Texas	37	9.4	9.2	-0.2

* -- significant at .05 level
** -- significant at .01 level
*** -- significant at .001 level

Table 4.8

Change in the extent of Medicaid participation between 1978 and 1983 for different categories of pediatricians

Category	N	Extent of Participation in 1978	Extent of Participation in 1983	Change in Extent of Participation 1978-1983
Place of medical graduation				
USMG	356	12.6%	12.0%	-0.6%
FMG	56	29.7	28.1	-1.6
Board certification				
Uncertified	101	18.6	17.3	-1.3
Certified	311	13.7	13.2	-0.5
Responsibility of society to ensure that medical care is available				
Disagree	69	11.6	10.7	-0.9
Agree	343	15.6	14.9	-0.7
Metropolitan practice				
Nonmetropolitan	59	18.0	19.2	+1.2
Metropolitan	353	14.4	13.4	-1.1

Table 4.9

Zero-order correlations for characteristics of pediatricians and the change in the extent of Medicaid participation between 1978 and 1983

Characteristic	Pearson	N	p-value
Age	+.118	412	.008
Nonphysician personnel costs	-.131	412	.004
Zip code area per capita income	-.072	409	.073
Physicians per 100,000 county population	-.032	412	.260
Proportion of zip code area population on Medicaid	-.008	409	.440
Log of weeks for payment	-.153	404	.001
Ratio of Medicaid reimbursement to usual fees	+.072	409	.073
RMPI	-.095	412	.027

Table 4.10

Unweighted standardized regression analysis of log of extent of participation in 1983 (EXTLOG83), panel physicians

Independent variables	Regression coefficients					
Characteristics in 1978	(1)	(2)	(3)	(4)	(5)	(6)
Age	+.084*	+.084*	+.078*	+.086*	+.083*	+.083*
Place of medical graduation	+.088**	+.084*	+.074*	+.078*	+.083*	+.068*
Board certific.	+.005	+.009	+.003	+.001	+.001	+.003
Responsibility of society to ensure that medical care is available	+.054	+.054	+.053	+.052	+.051	+.051
Nonphysician personnel costs	-.063	-.058	-.061	-.079*	-.074*	-.069
Zip code area per capita income	-.163***	-.152***	-.132**	-.159***	-.161***	-.127**
Physicians per 100,000 county population	-.004	-.011	+.001	-.007	-.010	-.010
Proportion of zip code population on Medicaid	+.091*	+.098*	+.048	+.050	+.095*	+.057
Metropolitan practice	-.077*	-.062	-.078*	-.083*	-.079*	-.069
Log of weeks for payment	-.121***	-.115***	-.115***	-.124***	-.129***	-.119***
Ratio of reimbursement to fee	-.032	-.033	-.029	-.026	-.024	-.024
RMPI	+.018	+.001	+.015***	+.027	+.081	+.052
EXTLOG78	+.625 ***	+.634***	+.623***	+.610***	+.618***	+.621***

Table 4.10 (continued)

Unweighted standardized regression analysis of log of extent of participation in 1983 (EXTLOG83), panel physicians

Independent variables	Regression coefficients					
Change 1978 - 1983						
/\Nonphysician personnel costs	---	-.080*	---	---	---	-.090
/\Zip code area per capita income	---	---	-.135***	---	---	-.151*
/\Proportion of zip code area population on Medicaid	---	---	---	+.094*	---	+.021
/\RMPI	---	---	---	---	+.093*	+.071
R2	.649	.654	.662	.655	.653	.668
N	367	367	367	367	367	367

Notes

1. Previous empirical findings have suggested that in personal interviews, physicians may overestimate the extent of their Medicaid participation by as much as 60 percent. Thus, such reports must be viewed with some caution. However, their self-reports tend to correlate highly with estimates based on data from patient records. Thus, either measure is acceptable for use in identifying determinants of extent of participation. See Kletke, et. al. 1982.

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10. The average adjusted extent of participation in 1983 is quite a bit lower for the panel than for the sample. This is primarily due to the fact that the 1983 panel excludes physicians who have entered practice in the last five years. Among panel members average adjusted extent was 14.1 percent, while the comparable figure for Medicaid participants entering practice in the last five years is 17.9 percent.

CHAPTER 5

Limited And Full Medicaid Participation

Introduction

Physicians participating in Medicaid may accept all patients who contact them, or they may choose to limit their participation in some way, for instance by accepting only referrals or emergency patients. This decision has important consequences for children's access to health care [1]. In this chapter we consider full and limited participation among Medicaid participants who reported accepting all new non-Medicaid patients and thus have room in their practices for additional Medicaid patients as well. Using the same model as in the two previous chapters, we will ask why physicians with room for additional patients still choose to limit their Medicaid participation.

In the first section, we discuss trends in full and limited participation between 1978 and 1983. The second section sets the context for the multivariate analysis with a comparison of descriptive statistics for full and limited participants. Third, we present results of a multivariate analysis of the determinants of full and limited participation in 1978 and 1983. In section four, we present an analysis comparing the determinants of extent of participation for full and limited participants. In the final section, we present a panel analysis of the change in full and limited participation between 1978 and 1983, and all findings are discussed.

The Sub-sample

Physicians can restrict their Medicaid participation in either of two ways: they can choose not to participate at all, or they can choose to participate to only a limited degree. The concept of full and limited participation refers to the second way in which participation may be restricted.

There are many reasons why a physician might limit his or her Medicaid participation. For instance, physicians may limit their Medicaid participation because their practices are at capacity, and consequently they limit their acceptance of new Medicaid patients in the same way they limit acceptance of new non-Medicaid patients. This particular reason for limiting Medicaid participation is not particularly policy-relevant. In this study, we are interested in physicians who distinguish between Medicaid and non-Medicaid patients by accepting all of the latter group into their practices, but not all of the former. Consequently, our study of full and limited participation is limited to pediatricians who state that they have room in their practices for additional patients.

As Table 5.1 indicates, our analysis of full and limited participation is

restricted to the sub-sample of pediatricians in our study who: (1) accept some or all Medicaid patients; and (2) accept all new non-Medicaid patients. The sub-sample was defined on the basis of the following two questions:

1. Do you now accept all Medicaid patients who contact you, only some, or none?

2. Aside from patients whose care is paid for by Medicaid, are you currently accepting all new patients who contact you, only some, or no new patients?

It must be emphasized that this analysis is restricted to a sub-sample of pediatricians. This is an especially important consideration when we analyze longitudinal changes in full and limited participation, since the results of our analyses will be influenced to some degree by changes in who is included and excluded from the analysis. On the other hand, it should also be noted that in both survey years the majority of pediatricians fell into the subsample -- almost 60 percent in 1978, and 67 percent in 1983.

Descriptive Statistics

Among physicians classified as either full or limited participants (i.e., Medicaid participants who accept all new non-Medicaid patients), the proportion who participated fully decreased from 74 percent in 1978 to 65 percent in 1983. Part of the decrease in full participation was due to changes in the composition of the subsample of pediatricians who met the criteria for inclusion in this analysis. Between 1978 and 1983 the proportion of Medicaid participants who accepted all new non-Medicaid patients increased from 70 percent to 76 percent. This increase in acceptance of new non-Medicaid patients enlarged the full and limited sub-sample, bringing into the analysis physicians who had limited their acceptance of non-Medicaid patients in 1978. These physicians were more likely to limit their acceptance of Medicaid patients in 1983.

Rates of full participation show considerable variation by state, ranging from 48 percent in Pennsylvania to 100 percent in Massachusetts, which has passed legislation requiring physicians who participate in Medicaid to participate fully. Eight of the thirteen study states have rates of full participation below 60 percent. This interstate variation is described in detail in Chapter 6.

Physicians entering practice in the last five years are only slightly more likely to participate fully than their more well established counterparts. In 1983, almost 67 percent of the pediatricians in the "new physician sample" limited their Medicaid participation in comparison to 65 percent of the panel.

Zero-Order Relationships

Table 5.2 summarizes the zero-order relationships in 1978 and 1983 between full and limited participation and the independent variables in the model. The table presents the means for the continuous variables and the percent of physicians in the reference categories of the dichotomous variables for both full and limited participants.

With respect to personal and practice characteristics, we see that full and limited participants are generally quite similar. The two groups do not differ significantly by age, place of graduation, or board certification in either 1978 or 1983. There also are no significant differences in the two groups' views on society's responsibility to ensure the availability of medical care to the poor. However, in both years full participants are likely to have significantly lower nonphysician personnel costs than limited participants.

When we turn to service area characteristics, we see that in both survey years, full participants tend to practice in areas with lower per capita income. However, there is no significant difference between the groups in the proportion of the population eligible for Medicaid or the physician-to-population ratio in the service area. Full participants are less likely than limited participants to practice in metropolitan areas.

Looking finally at the Medicaid policy variables, in both 1978 and 1983 full participants tend to practice in states with shorter payment delays and higher ratios of reimbursement to fees. In 1978, the average RMPI is higher for full participants; in 1983, however, there is no significant difference.

These zero-order relationships suggest ways in which situational and policy characteristics may be related to full and limited participation. Many of the independent variables may be interrelated, however. A multivariate analysis is needed to determine the contribution of each factor while controlling for the effects of the others. Discriminant analysis is used to examine the determinants of full and limited participation in 1978 and 1983.

Multivariate Analysis: 1978 and 1983

Table 5.3 displays the coefficients for the analysis of full and limited participation in 1978 and 1983. In general, the fit of the equation is less good in 1983 than in 1978, as shown by the increase in the Wilk's Lambda from 0.848 to 0.889. In addition, there are a number of notable changes in the factors associated with full and limited participation. These are described below.

While none of the personal or practice characteristics are significant in 1978, the 1983 analysis shows that both place of medical school graduation and nonphysician personnel costs are significantly related to full and limited participation. In 1983, foreign medical graduates and physicians with low nonphysician personnel costs are more likely to be full participants. Both of these results are consistent with two-market theory.

In 1978, none of the service area characteristics measuring supply and demand factors are significant. In 1983, however, we find that physicians practicing in metropolitan areas are significantly more likely to limit their Medicaid participation. This finding is contrary to what would be expected on the basis of the two-market theory.

Finally, we see that while all three state Medicaid policy variables are significant in the expected direction in 1978, in the 1983 equation both the

payment delay variable and the RMPI are no longer significant. The ratio of reimbursement to fees is significant in both years, with full participants likely to have a higher proportion of their fees reimbursed by Medicaid.

To sum up briefly, in 1978 only the three state policy variables, payment delay, reimbursement, and the measure of professional incentives, showed any significant relationship to full and limited participation. These policy variables had the predicted relationship to full and limited participation: full participants are more likely to live in states with favorable Medicaid policies. But in 1983, the significant factors are place of medical graduation, nonphysician personnel costs, metropolitan practice, and reimbursement: full participants are likely to be foreign medical graduates, to have lower personnel costs, to practice in nonmetropolitan areas, and to have a greater proportion of their fees reimbursed. It appears in 1983, that various economic incentives and constraints are having a greater effect on full and limited participation than professional incentive aspects of Medicaid policy.

Comparing Extent of Participation for Limited and Full Participants

What are the implications of physicians' decisions to limit their Medicaid participation? As one might expect, physicians who limit their participation see relatively fewer Medicaid patients, and thus the extent of Medicaid participation is quite a bit lower for limited participants than for full participants. Table 5.4 shows that in 1978, the average extent of participation was 21 percent for full participants and only 10 percent for full participants. Similarly, in 1983 the average extent was 21 percent for full participants and 9 percent for limited participants. Thus pediatricians' decisions about limiting participation have a major impact on the delivery of health care services to low income children.

We hypothesized that the determinants of extent of participation would differ for full and limited participants. Since full participants are not explicitly restricting the acceptance of Medicaid patients, we expected their extent of participation to be primarily a function of demand from the Medicaid eligible population and positive Medicaid economic and professional incentives. Limited participants' extent of participation, in contrast, is expected to be primarily a function of supply factors, especially competition from other providers which might induce some, albeit limited, participation and, to a lesser extent a function of the Medicaid policy incentives.

Table 5.5 presents regression analyses of the log of extent for both limited and full participants. The two regression analyses generally support the hypotheses stated above. The model explains a considerable proportion of the variance in extent of participation for both groups, doing somewhat better for full participants than for limited participants. It is possible that our underlying theoretical model is more appropriate for explaining the behavior of the former group than the latter.

The regression analysis for full participants indicates that foreign medical graduates and physicians with lower practice costs have a greater extent of participation. Neither variable is significant for limited participants. Lower per capita income in the service area is significantly

associated with greater extent of participation for full participants but not limited participants. A relatively larger Medicaid population in the service area is associated with a greater extent of participation for both groups, although the association is much more highly significant for full participants. Thus full participants do generally appear to be more responsive to demand factors than limited participants.

Supply factors determine, to varying degrees, the extent of participation for both groups. Limited participants are likely to see fewer Medicaid patients if they practice in metropolitan areas, while this relationship is not statistically significant for full participants. The physician-to-population ratio is inversely associated with extent of participation for both groups, although of greater magnitude for limited participants. Once again, as in previous analyses, the relationships implied by these coefficients are opposite to those predicted by the two market theory; a relatively greater provider supply is associated with _less_ rather than _more_ participation.

Finally, we note that the effects of economic and professional incentives on the extent of participation are not the same for the two groups. While the RMPI has a positive effect on extent for both groups, the fee ratio has a significant positive effect for full participants but not for limited participants. In contrast, fewer weeks between billing and payment are associated with a greater extent of participation among limited participants, while not a significant factor for full participants.

In summary, the regression analyses provide evidence that the determinants of extent of participation do indeed differ for full and limited Medicaid participants. Extent of participation is much more a function of demand factors for full participants, and the effects of economic and professional incentive differ between the two groups. Few variables are as highly significant for limited participants as they are for full participants; the model explains 25 percent less variance; and the significant variable pertain mainly to physician supply, Medicaid patient demand, payment delays, and professional incentives.

Panel Analysis

This section analyzes _changes_ in pediatricians' decisions to either limit their participation in Medicaid or to participate fully. As in the previous section, for pediatricians to be included in this analysis, they had to: (1) participate in Medicaid; and (2) state that they accepted new non-Medicaid patients into their practices. This section analyzes data for the 254 pediatricians who meet these two criteria _in both 1978 and 1983._

Descriptive Statistics

For the 254 pediatricians in the panel analysis of full and limited participation, the proportion of full participants dropped from 76 percent to 72 percent between 1978 and 1983, a decline not statistically significant at the $p < .05$ level. The observed decline in full Medicaid participation is the net effect of two types of changes: (1) limited participants in 1978 deciding to participate fully in 1983; and (2) full participants in 1978 choosing to limit their participation in 1983. The different components of the change in

full and limited participation are shown in Table 5.6. Of the 192 pediatricians in the panel who were full participants in 1978, 13 percent (26) decided to limit their participation in 1983. Of the 62 pediatricians who were limited participants in 1978, 29 percent (18) had decided to participate fully in 1983. If these transition rates were to continue indefinitely, the proportion of pediatricians participating fully would stabilize at 68 percent.

What are the implications of changes in physicians' decisions to limit their Medicaid participation? Table 5.7 shows that changing from a full participant to a limited participant generally reduces the proportion of Medicaid patients in one's practice. For those pediatricians who changed from full participants in 1978 to limited participants in 1983, the average extent of participation dropped from almost 17 percent to 13 percent. Conversely, the extent of participation rose from 12 percent to 15 percent for those who changed from limited to full participation. Thus, changes in full and limited Medicaid participation play an important part in determining the access of low income children to health care.

Table 5.8 shows the change in the proportion of fully participating pediatricians in each of the thirteen study states between 1978 and 1983. The change in full participation shows much variation among the states, ranging from an increase of almost 18 percentage points in Pennsylvania to a decrease of 33 percentage points in Nebraska. Nevertheless, none of the changes shown in Table 5.8 are significant, due in part to small sample sizes in many of the states.

As stated earlier, changes in full and limited Medicaid participation between 1978 and 1983 can be divided into two components -- decisions by full participants in 1978 to limit their participation in 1983; and decisions by limited participants in 1978 to participate fully in 1983. In the analysis that follows, each of these decisions is examined separately.

Changes by Full Participants in 1978: Zero-order Relationships

Table 5.9 presents data on the 172 pediatricians who were full participants in 1978. The table reflects the differences between those who decided to limit their participation in 1983 and those who decided to continue their full participation. The means of the independent variables in our model are listed for both the 1978 and 1983 values of the independent variables. There are only slight differences between the full participants in 1978 who became limited participants and those who continued their full participation. Only four of the independent variables show differences statistically significant at the $p < .05$ level. The physicians who became limited participants were younger; they had higher costs for nonphysician personnel in 1983; they were more likely to practice in metropolitan areas in 1983; and they reported receiving lower Medicaid reimbursements relative to their current usual fees.

Changes by Full Participants in 1978: Multivariate Analysis

Table 5.10 reports the results of a discriminant analysis that examines the factors influencing pediatricians who participated fully in 1978 to limit their participation in 1983. The 1978 values of the independent variables (and their changes between 1978 and 1983) are used to distinguish between the

pediatricians who became limited participants in 1983 and those who remained full participants. Thus the analysis shows which pediatricians are most likely to have changed from full to limited Medicaid participation between 1978 and 1983.

The first column of Table 5.10 shows the first discriminant analysis equation for pediatricians who participated fully in 1978. The analysis shows that none of the 1978 variables in the model have a significant effect on pediatricians' decisions to become limited participants. Note, however, that this equation does not show what effect changes in the independent variables between 1978 and 1983 might have on the extent of participation. This is described in the remaining columns of the table.

One important feature of panel analysis is that it allows the researcher to determine whether changes in the independent variables influence changes in the dependent variable -- for example, whether more generous Medicaid policies have an effect on persuading physicians to increase their Medicaid participation. After the completion of the discriminant analysis shown in the first column in Table 5.10, changes in the independent variables were entered into the discriminant analysis one at a time. Three change variables had statistically significant effects on changes in full Medicaid participation. The second column of Table 5.10 shows that a rise in the salaries of non-physician personnel was significantly associated with pediatricians who were full participants in 1978 becoming limited participants in 1983. The third column shows that pediatricians who moved from non-metropolitan to metropolitan areas were likely to become limited participants. The fourth column shows that a decrease in Medicaid reimbursement for a follow-up office visit (relative to the pediatrician's current usual fee) is also associated with pediatricians becoming limited Medicaid participants. The fifth column of Table 5.10 shows that all three change variables still had significant effects when they were entered into the discriminant analysis simultaneously. In summary, increasing nonphysician personnel costs, moving into a metropolitan area, and declining Medicaid reimbursement were associated with becoming a limited participant in 1983.

Changes by Limited Participants in 1978: Zero-order Relationships

Table 5.11 presents data for the 53 pediatricians who were limited participants in 1978, showing the differences between those who became full participants in 1983 and those who continued their limited participation. The means of the independent variables in 1978 and 1983 are listed for both groups. The differences between the two groups are slight. Only two of the independent variables were significantly different at the $p < .05$ level -- the estimate of the proportion of Medicaid eligibles in the physician's zip code area in 1978; and the number of weeks to receive Medicaid reimbursement in 1978.

The proportion of the population eligible for Medicaid in the physicians' service area was significantly smaller in 1978 for pediatricians who changed from limited to full participants. However the proportion of the population eligible for Medicaid increased between 1978 and 1983 for these pediatricians, possibly indicating that the change in their participation was due to the growth in the Medicaid market.

The number of weeks to receive Medicaid reimbursement in 1978 was significantly lower for the pediatricians who became new full participants in 1983 than for those who continued limited participation. However this difference was not significant in 1983. It is somewhat counterintuitive that the decline in the amount of time to receive Medicaid reimbursements was less for the physicians who became full participants than for those who continued limited participation. This finding may indicate that this variable has a lagged effect on decisions about full and limited participation. There also may be a threshold effect: those for whom it takes more than one and one-half months to receive payment may feel that despite declines, the length of time elapsing between billing and payment is still too long.

Changes by Limited Participants in 1978: Multivariate Analysis

Table 5.12 presents the results of a discriminant analysis that examines the factors influencing limited participants in 1978 to either become full participants in 1983, or to continue their limited participation. The 1978 values of the independent variables (and their changes between 1978 and 1983) are analyzed to distinguish between pediatricians who became full participants in 1983 and those who remained limited participants.

The first column of Table 5.12 shows the first discriminant analysis equation for the pediatricians who were limited participants in 1978. The analysis shows that the decision to participate fully was most likely to be made by pediatricians who practiced in areas with relatively small Medicaid populations in 1978.

After completing the discriminant analysis shown in the first column in Table 5.12, the changes in the independent variables were entered into the discriminant analysis one at a time. Only one of the change variables was statistically significant. The analysis in the second column of Table 5.10 shows that the pediatricians who changed their opinions in favor of government's responsibility to the poor were more likely to become full participants in 1983. However there is a strong possibility that this result may be spurious due to endogeneity of the independent variable. That is, pediatricians who are full participants in Medicaid may be inclined to adopt liberal attitudes. Consequently those pediatricians who change from limited to full participants may tend to change their attitudes accordingly.

Discussion

Limited Medicaid participation became somewhat more widespread among pediatricians between 1978 and 1983, changing in varying amounts among the thirteen states in our sample. These trends are of particular concern because of their implications for the access of low income children to pediatric care. While Chapter 3 indicated that most pediatricians are continuing to participate in Medicaid over time, they are increasingly qualifying the nature of their participation. We observe that explicitly limiting one's Medicaid participation does, in general, result in seeing relatively fewer Medicaid patients and, by implication, result in relatively less access for these children to pediatric care.

The replication of our 1978 model in 1983 suggests that the decision to

become a limited Medicaid participant is, to a considerable degree, a function of the economic constraints and economic incentives facing the pediatrician. Foreign medical graduates, those with low practice overhead costs, and those in nonmetropolitan areas are all more likely to be full participants in 1983. And, in addition, those receiving a relatively higher Medicaid reimbursement relative to their usual fees are also more likely to be full participants in 1983.

Given the findings of the replication, what options might be available to Medicaid policymakers and administrators for increasing full participation among Medicaid participants? The most obvious answer following from this analysis is to maintain relatively generous reimbursement levels for pediatric care. Professional incentives, such as the physician autonomy implied by higher RMPI scores, seem relatively less important to this decision than they are, for example, in either the decision to become a participant in the first place (see Chapter 3), or the decision as to extent of one's participation (see Chapter 4). Thus, the Medicaid policy options for fostering full Medicaid participation are relatively few: adequate reimbursement seems critical to fostering full participation.

Both full and limited participants are participating in Medicaid and, presumably, can be encouraged to do so to a greater degree -- even though some are limiting their participation. Our analysis suggests that both positive economic and positive professional incentives will foster greater extent of participation for both groups, although the results of such policy changes are likely to be greater for full participants. This leaves a number of alternatives available for use by policymakers and administrators including minimizing payment delays, increasing the professional autonomy of participating physicians, and providing relatively more adequate reimbursement for services rendered to Medicaid patients. Both groups are also likely to increase their participation in response to increasing demand from Medicaid patients which might come about, for example, from less stringent Medicaid eligibility requirements. Thus, while the results are likely to be more pronounced among full participants, our findings suggest that both groups can be encouraged to participate more through the manipulation of the economic and professional incentives inherent in Medicaid policies.

The panel analysis provides some unique insights into changes in full and limited participation made by pediatricians between 1978 and 1983. We note that physicians who had been full participants in 1978 and became limited participants in 1983 were responding to specific changes occurring in their environment during that time period: they were most likely to have experienced increases in practice overhead costs (making Medicaid participation less financially viable), to have moved into a metropolitan area (where limited participation is more prevalent), or to have experienced a decrease in the level of their Medicaid reimbursement (also making Medicaid participation less financially viable). These findings reinforce those of the replication: becoming a limited participant between 1978 and 1983 was a response to economic constraints and incentives which might, to some extent, be mitigated by positive economic incentives created by Medicaid policies.

In contrast, changing from a limited participant in 1978 to a full participant in 1983 bore relatively little relationship to changes in the physicians' environment during this period. The change was most likely to occur among those who had lived in areas with relatively few Medicaid

eligibles in 1978, and among those whose attitude about government's role in ensuring access to care had become more liberal (perhaps in response to the Reagan administration's policies during this time period). It is logical that we would see very little evidence that positive changes in Medicaid policies brought about changes from limited to full participation during this time period: as both Chapter 1 and Chapter 6 make evident, 1978 to 1983 was a period in which very few changes which physicians would view as positive were effected in Medicaid at either the federal or the state level, primarily because of overriding concerns with recession, unemployment, and rising medical costs.

It is relatively easy to imagine an ideal situation in which most pediatricians would participate in Medicaid and very few would impose any explicit limitations on their participation. Medicaid patients in need of pediatric care would have unrestricted choice among the providers in their community, and extent of participation would be a function primarily of the size of the demand from the Medicaid eligible population. Our analysis suggests two factors which currently mitigate against this ideal. First, negative economic incentives such as low fees and high practice overhead costs discourage physicians from full program participation. Second, competition from other providers, particularly in metropolitan areas, also discourages full program participation. Our analysis suggests that the former set of factors, at least, is amenable to change through public policies which would create more favorable economic conditions surrounding full participation. By, in effect, reducing the costs to physicians associated with participation (by raising fees and minimizing payment delays, for example), program administrators can foster more full participation--as well as a greater extent of participation among both full and limited participants.

Table 5.1

Typology of pediatricians with respect to acceptance of Medicaid patients and all new non-Medicaid patients

		Accept all non-Medicaid patients?	
		NO	YES
Accept Medicaid patients?	NONE	not classified	not classified
	ONLY SOME	not classified	LIMITED * PARTICIPANTS
	ALL	not classified	FULL * PARTICIPANTS

* Included in the subsample for analysis of full and limited participation.

Table 5.2

Full and limited participants: group means

Characteristic	1978 Full (N=329)	1978 Limited (N=111)	1983 Full (N=294)	1983 Limited (N=150)
Age	47.09	46.84	49.77	47.95
	p=n.s.		p=n.s.	
Place of medical graduation	16.72	14.41	15.61	9.84
	p=n.s.		p=n.s.	
Board certification	73.25	73.87	84.20	78.61
	p=n.s.		p=n.s.	
Responsibility of society to ensure that medical care is available	85.71	82.88	84.22	80.59
	p=n.s.		p=n.s.	
Nonphysician personnel costs	857.14	913.80	1136.70	1206.67
	p=.000		p=.000	
Zip code area per capita income	3612.64	3874.98	10394.32	11203.62
	p=.023		p=.019	

Table 5.2 (continued)

Full and limited participants: group means

Characteristic	1978 Full (N=329)	1978 Limited (N=111)	1983 Full (N=294)	1983 Limited (N=150)
Physicians per 100,000 county population	172.91	179.94	202.43	218.45
	p=n.s.		p=n.s.	
Proportion of zip code area population on Medicaid	8.16	7.07	7.70	7.39
	p=n.s.		p=n.s.	
Metropolitan practice	80.24	89.19	80.80	94.09
	p=.0320		p=.0002	
Elapsed weeks between billing and payment of Medicaid claims	6.76	8.55	5.85	7.72
	p=.005		p=.044	
Ratio of Medicaid reimbursement to usual fee	0.782	0.705	0.750	0.707
	p=.000		p=.000	
RMPI	17.62	16.47	17.96	18.00
	p=.000		p=n.s.	

Table 5.3

Discriminant analysis:
full and limited participation in 1978 and 1983

Independent variable	Standardized discriminant coefficients 1978	1983
Age	-.061	+.222
Place of medical graduation	+.124	+.357*
Board certification	+.057	+.274
Responsibility of society to ensure that medical care is available	+.063	+.199
Nonphysician personnel costs	-.222	-.512***
Zip code area per capita income	-.055	+.025
Physicians per 100,000 county population	+.137	+.128
Proportion of zip code area population on Medicaid	+.137	+.183
Metropolitan practice	-.176	-.327*
Log of weeks for payment	-.324*	-.197
Ratio of Medicaid reimbursement to usual fees	+.627***	+.421*
RMPI	+.591***	+.119
Wilks' Lambda	.848	.889
N	440	451

* -- $p<.05$
** -- $p<.01$
*** -- $p<.001$

Table 5.4

Average extent of Medicaid participation for full and limited participants, 1978 and 1983

	1978	1983
Limited Participants	10.1%	9.3%
Full Participants	21.4%	21.1%
Total Subsample	18.7%	18.0%

Table 5.5

Regression analysis of log of extent of participation for full and limited participants, 1983

Independent variable	Unstandardized Regression Coefficients: Limited Participants	Full Participants
Age	-.005496	-.000382
Place of medical graduation	+.339	+.365**
Board certification	-.226	-.193
Responsibility of society to ensure that medical care is available	+.0205	+.1196
Nonphysician personnel costs	+.0002550	+.0000667
Zip code area per capita income	-.0000429	-.0000642***
Physicians per 100,00 county population	-.001933*	-.000956**
Proportion of zip code area population on Medicaid	+.0401*	+.0495***
Metropolitan practice	-.8361*	-.0884
Log of weeks for payment	-.3525**	-.0178
Ratio of Medicaid reimbursement to usual fees	+.136	+1.405**
RMPI	+.0984*	+.0818***
(CONSTANT)	+1.852	+0.685
R^2 =.309	.437	
N	151	291

* -- p<.05
** -- p<.01
*** -- p<.001

Table 5.6

Changes in the proportion of pediatricians who participated fully in Medicaid between 1978 and 1983

		1983		
		Full Participants	Limited Participants	TOTAL
1978	Full Participants	166 86.5%	26 13.5%	192 100.0%
	Limited Participants	18 29.0%	44 71.0%	62 100.0%
	TOTAL	184 72.4%	70 27.6%	254 100.0%

Table 5.7

Changes in the extent of Medicaid participation for full and limited participants between 1978 and 1983

		1983		
		Full Participants	Limited Participants	TOTAL
1978	Full Participants	22.1%-->21.8% (147)	16.8%-->12.9% (23)	21.4%-->20.6% (170)
	Limited Participants	12.1%-->15.2% (18)	9.0%--> 7.0% (35)	10.1%--> 9.8% (53)
	TOTAL	21.0%-->21.1% (165)	12.1%--> 9.3% (58)	18.7%-->18.0% (223)

Table 5.8

Change in the proportion of pediatricians who are full participants in Medicaid between 1978 and 1983, by state

State	N	Proportion of full participants in 1978	Proportion of full participants in 1983	Change in proportion of full participants 1978-1983
Total	254	75.6%	72.4%	-3.2%
California	19	68.4	52.6	-15.8
Colorado	17	82.4	82.4	0.0
Georgia	9	77.8	55.6	-22.2
Indiana	21	81.0	85.7	+4.8
Iowa	24	79.2	87.5	+8.3
Maryland	25	72.0	68.0	-4.0
Massachusetts	30	100.0	100.0	0.0
Nebraska	6	83.3	50.0	-33.3
New York	19	68.4	52.6	-15.8
Oklahoma	24	87.5	75.0	-12.5
Pennsylvania	17	35.3	52.9	+17.6
Tennessee	25	72.0	68.0	-4.0
Texas	18	61.1	66.7	+5.6

* -- significant at .05 level
** -- significant at .01 level
*** -- significant at .001 level

Table 5.9

Change in the means of the characteristics of pediatricians who participated fully in 1978

Characteristic	Total (N=172)	Limited participants in 1983 (N=23)	Full participants in 1983 (N=149)	Significance of difference between full and limited participants
Age (1978)	47.1	44.3	47.7	.045
Place of medical graduation (1978)	17.4	17.4	17.4	n.s.
Board certification				
1978	74.4	65.2	75.8	n.s.
1983	87.2	78.3	88.6	n.s.
Responsibility of society to ensure medical care				
1978	84.9	78.3	85.9	n.s.
1983	83.1	87.0	82.6	n.s.
Nonphysician personnel costs				
1978	869.1	853.4	855.5	n.s.
1983	1139.7	1196.6	1130.9	.042
Zip code area per capita income				
1978	3471.7	3555.2	3458.9	n.s.
1983	10397.6	10782.9	10338.1	n.s.
Physicians per 100,000 county population				
1978	168.7	179.4	167.1	n.s.
1983	201.5	207.9	200.5	n.s.

Table 5.9 (continued)

Change in the means of the characteristics of pediatricians who participated fully in 1978

Characteristic	Total (N=172)	Limited participants in 1983 (N=23)	Full participants in 1983 (N=149)	Significance of difference between full and limited participants
Proportion of zip code area population on Medicaid				
1978	8.5	8.0	8.6	n.s.
1983	7.6	6.5	7.8	n.s.
Metropolitan practice				
1978	80.8	91.3	79.2	n.s.
1983	82.6	100.0	79.9	.000
Elapsed weeks between billing and payment of Medicaid claims				
1978	7.1	7.0	7.1	n.s.
1983	5.9	6.9	5.8	n.s.
Ratio of Medicaid reimbursement to usual fee				
1978	77.2	73.6	77.8	n.s.
1983	74.1	68.3	75.0	.015
RMPI				
1978	17.6	17.3	17.6	n.s.
1983	18.0	18.2	17.9	n.s.

Table 5.10

Unweighted discriminant analysis of full and limited participation for panel members who were full participants in 1978 and either full or limited participants in 1983

Independent variables	Standardized discriminant coefficients				
Characteristics in 1978	(1)	(2)	(3)	(4)	(5)
Age	+.562	+.488	+.394	+.386	+.338
Place of medical graduation	+.090	+.029	+.120	+.083	+.078
Board certification	+.308	+.224	+.237	+.268	+.207
Responsibility of society to ensure that medical care is available	+.351	+.277	+.206	+.288	+.191
Nonphysician personnel costs	+.206	+.178	+.107	+.300	+.192
Zip code per capita income	-.008	+.113	+.066	+.093	+.185
Physicians per 100,000 county population	-.202	-.303	-.160	-.142	-.219
Proportion of zip code area population on Medicaid	-.079	+.055	-.008	+.242	+.247
Metropolitan practice	-.419	-.046	-.517	-.203	-.163
Log of weeks for payment	-.031	+.034	-.066	+.000	+.000
Ratio of Medicaid reimbursement to usual fee	+.546	+.409	+.357	+1.030**	+.663*
RMPI	+.215	-.096	+.066	+.266	-.044
Change 1978 - 1983					
/\Personnel costs	---	-.758**	---	---	-.487*
/\Metropolitan practice	---	---	-.760**	---	-.565**
/\Ratio of reimburse to fee	---	---	---	+.969**	+.586*
Wilks' Lambda	.942	.897	.888	.892	.819
N	172	172	172	172	172

Table 5.11

Change in the means of the characteristics of pediatricians who limited their participation in 1978

Characteristic	Total (N=53)	Limited participants in 1983 (N=35)	Full participants in 1983 (N=18)	Significance of difference between full and limited participants
Age (1978)	46.1	45.8	46.5	n.s.
Place of medical graduation (1978)	15.1	11.4	22.2	n.s.
Board certification				
1978	77.4	77.1	77.8	n.s.
1983	83.0	80.0	88.9	n.s.
Responsibility of society to ensure care				
1978	86.8	91.4	77.8	n.s.
1983	84.9	80.0	94.4	n.s.
Nonphysician personnel costs				
1978	915.6	931.9	883.7	n.s.
1983	1208.8	1215.9	1195.1	n.s.
Zip code area per capita income				
1978	4110.7	4214.1	3909.6	n.s.
1983	11417.0	11463.4	11326.9	n.s.
Physicians per 100,000 county population				
1978	183.6	178.2	194.0	n.s.
1983	211.4	206.7	220.5	n.s.

Table 5.11 (continued)

Change in the means of the characteristics of pediatricians who limited their participation in 1978

Characteristic	Total (N=53)	Limited participants in 1983 (N=35)	Full participants in 1983 (N=18)	Significance of difference between full and limited participants
Proportion of zip code area population on on Medicaid				
1978	7.0	8.3	4.4	.011
1983	7.8	8.7	6.2	n.s.
Metropolitan practice				
1978	92.5	97.1	83.3	n.s.
1983	90.6	97.1	77.8	n.s.
Elapsed weeks between billing and payment of Medicaid claims				
1978	8.4	9.3	6.4	.019
1983	7.0	7.8	5.4	n.s.
Ratio of Medicaid reimbursement to usual fees				
1978	71.5	69.5	75.3	n.s.
1983	71.9	70.8	74.0	n.s.
RMPI				
1978	16.4	16.4	16.3	n.s.
1983	18.2	18.3	17.9	n.s.

Table 5.12

Unweighted discriminant analysis of full and limited participation for panel members who were limited participants in 1978 and either full or limited participants in 1983

Independent Variables	Standardized discriminant coefficients	
Characteristics in 1978	(1)	(2)
Age	+.010	-.046
Place of medical graduation	+.446	+.288
Board certification	+.231	+.149
Responsibility of society to ensure that medical care is available	-.286	+.217
Nonphysician personnel costs	-.539	-.423
Zip code per capita income	-.569	-.498
Physicians per 100,000 county population	+.541	+.281
Proportion of zip code area population on Medicaid	-.771*	-.683*
Metropolitan practice	-.131	-.226
Log of weeks for payment	-.135	-.245
Ratio of Medicaid reimbursement to usual fee	-.013	+.057
RMPI78	-.040	-.116
Change 1978 - 1983		
/\ Responsibility of society	---	+.748*
Wilks' Lambda	.654	.654
N	51	51

Notes

1. Davidson SM, Perloff, JD, Kletke, PR, Schiff DW, Connelly, JP. Full and limited Medicaid participation among pediatricians. Pediatrics 1983; 72: 552.

CHAPTER 6

State Level Analysis of Physician Participation in Medicaid: 1978-1983

Introduction

There is great diversity among state Medicaid programs. While the federal government defines the broad parameters of each state program, the states retain much latitude in Medicaid policymaking. As a result, an evaluation of Medicaid program outcomes must ultimately be conducted on a state by state basis. In this Chapter we turn to a state by state analysis of physician participation in Medicaid; the 1978 and 1983 physician survey data are aggregated to the state level, becoming indicators of Medicaid participation as an outcome of both state policies and the broader political, economic, and social environment in which these policies are made and changed.

Just as state Medicaid policies exhibit tremendous variation, so do the outcomes of state Medicaid policies. We see in Table 6.1 for example, that in 1978 the proportion of pediatricians participating in Medicaid varied from a low of 51.6 percent in Georgia to a high of 100 percent in Iowa. A similarly varied pattern is evident in 1983; participation has fallen still further in Georgia to 42.1 percent but in most states the proportion participating in the program remains high, generally above 80 percent. In only one state, Pennsylvania, was the decline in participation statistically significant between 1978 and 1983.

When aggregated to the state level, average extent of participation also varies by state and over time. These variations are evident in Table 6.2 where we see that in 1983 average extent of participation ranged from a low of 9 percent in Texas to a high of 24.3 percent in California. Significant changes in extent of participation did not occur in any of the thirteen states. Finally, Table 6.3 reflects the interstate variation in the proportion of pediatricians who limit their Medicaid program participation. This participation measure shows the greatest variation both in 1978 and in 1983. In addition, limited participation has shown significant increases in several states during the five year study period. For example, limited participation more than doubled in California, Nebraska, and Oklahoma and in only two states, Iowa and Pennsylvania, did this indicator of state Medicaid program participation show any decline.

In this Chapter we present 13 case studies of state Medicaid programs. These include data on the social and economic conditions prevailing in each state during the period of 1978 through 1983, taking into account factors such as the impact of recession and unemployment and the composition of the state's poverty population. In addition, we present a detailed account of changes in state Medicaid policies occurring between 1978 and 1983 in the areas of eligibility, covered services, reimbursement, and cost containment. These policy changes include not only those occurring in response to OBRA and TEFRA but also those instituted at the state's initiative. The case studies assume a working knowledge of Medicaid policies. However, for readers less familiar with these policies, explanatory information is included in Appendix F.

Table 6.1

Proportion of pediatricians participating in Medicaid, 1978 and 1983

State	1978	1983
California	98.2%	91.4%
Colorado	96.2	90.0
Georgia	51.6	42.1
Indiana	90.5	88.3
Iowa	100.0	100.0
Maryland	95.3	90.9
Massachusetts	95.1	95.3
Nebraska	96.2	98.2
New York	85.2	82.2
Oklahoma	94.5	92.8
Pennsylvania	82.0	68.2 *
Tennessee	78.0	83.5
Texas	79.2	77.5

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Table 6.2

Average extent of participation among participants, 1978 and 1983

State	1978	1983
California	32.5%	24.3%
Colorado	12.3	12.9
Georgia	16.2	11.0
Indiana	14.5	16.2
Iowa	16.6	17.2
Maryland	11.5	10.6
Massachusetts	20.0	18.5
Nebraska	16.1	13.4
New York	17.9	21.0
Oklahoma	13.8	10.7
Pennsylvania	14.4	15.6
Tennessee	8.9	11.1
Texas	12.1	9.0

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Table 6.3

Proportion of pediatricians limiting participation, 1978 and 1983

State	1978	1983
California	22.5%	51.3% ***
Colorado	13.3	18.6
Georgia	40.9	61.0 ***
Indiana	20.0	24.4
Iowa	24.0	12.5
Maryland	31.8	44.4
Massachusetts	a	a
Nebraska	5.9	41.6 **
New York	40.0	49.5
Oklahoma	14.6	35.2 **
Pennsylvania	67.6	51.5
Tennessee	41.0	42.6
Texas	38.9	50.0

a -- Physicians in Massachusetts must accept all Medicaid patients as a condition of participation in the program.

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

The Medicaid program descriptions are followed by data from our 1978 and 1983 physician surveys, aggregated to the state level. These data describe the physicians' participation in and experiences with the state Medicaid program during the period 1978 and 1983. The descriptive state program data and the survey data are then used as the basis for a policy analysis in which we examine recent trends in pediatrician participation in each state in the context of its own state policies and socioeconomic environment. Wherever possible, we make specific recommendations about strategies available to that state's policymakers and administrators for fostering greater participation in Medicaid among its pediatricians. In conclusion, themes and recommendations emerging from the 13 case studies are presented.

While the 1978 and 1983 survey methods were described earlier, some additional comments on the methods used in developing the state Medicaid program case studies are needed. Our discussion of changes in Medicaid program characteristics is based on a comparison of 1978 and 1983 Commerce Clearing House State Charts, standardized descriptions of state Medicaid programs which are updated regularly. Other state by state descriptive sources were also used such as various publications of the Health Care Financing Administration, and publications and reports prepared by the National Governor's Association, the Intergovernmental Health Policy Project, and LaJolla Management Corporation. In addition, wherever possible, state specific documents were used to prepare the case studies. These sources are cited in the list of general references that appears at the conclusion of this chapter [1-8]. State Medicaid administrators reviewed drafts of the reports for accuracy as well as responding to our telephone inquiries as needed. However, given the rapidly changing Medicaid policy environment, we acknowledge and assume responsibility for any data which are inaccurate or outdated.

The case studies also include state socioeconomic information from the Census Bureau and the Bureau of Labor Statistics. Data on the state's AFDC program were drawn from DHHS Office of Family Assistance annual publications describing state AFDC programs. Citations for these documents are included among the general references listed at the conclusion of the chapter.

California

Poverty Population

Poverty rates in California are slightly below the national average [9]. (See Table 6.4.) Still, one out of ten of the nation's poor children live in California. Poverty is largely an urban phenomenon -- only 8 percent of the state's poor children live in rural areas. Nearly half of California's poor families are headed by women.

Medicaid Eligibility

California's Medicaid program is the country's largest: 3,747,880 people received Medi-Cal in 1982, comprising 18 percent of total U.S. recipients [10]. The Medicaid program is broad in its eligibility provisions. All AFDC and SSI recipients, as well as a variety of noncash beneficiaries, may receive Medicaid benefits. Relatively high AFDC income limits and optional AFDC provisions such as AFDC-UP have meant broad AFDC coverage of California's poverty population. However, the OBRA restrictions implemented in 1981 and 1982 offset rising unemployment rates and cut welfare rolls back to 1980 levels [11].

Medi-Cal's optional coverage extends Medicaid coverage to groups including the "medically indigent", which includes children under 21 who are financially eligible for public assistance but either are categorically ineligible or have not applied for aid. Responsibility for medically indigent adults was transferred from the state to the counties on January 1983. The medically needy program provides additional coverage for categorically eligible individuals. The medically needy protected income level was reduced from $801 to $601 per month in 1982. Aside from these changes, Medicaid coverage for noncash recipients has changed little over the past five years. Because Medi-Cal already covers the categories of pregnant women and children mandated by the Deficit Reduction Act, no modification of eligibility provisions will be necessary.

Medicaid Services

In addition to the eight federally mandated services, California provides 27 optional services. Several have been added since 1978. However, in 1982, the state began limiting use of certain optional services to two occasions of service per month. A lock-in program allows restriction of over-utilizers to one physician and/or pharmacy. Copayments were introduced in 1982 for specific services for both categorically and medically needy Medicaid recipients. Medically needy recipients are eligible for the same services as the categorically needy.

Physician visits are not limited by the Medi-Cal program. Certain procedures such as sterilization do require prior authorization. In 1983, the state ceased reimbursing on an inpatient basis surgery which could safely be performed in an outpatient setting; further, it began to require prior authorization for nondiagnostic and nonemergency outpatient elective surgery. Additional limits have been imposed on inpatient hospital services. However, no changes have occurred in EPSDT services.

Table 6.4

State Medicaid program, California

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 11.4%		
Unemployment rate (March)	8.0%	10.9%
Eligibility requirements		
Maximum AFDC monthly payment	$423	$625
Medically needy annual protected income level	$5604	$9008
Proportion of poor children not covered by Medicaid (1980) 39.0%		
Recipients and expenditures		
Medicaid recipients	3,436,194	3,499,920
Medicaid expenditures (in thousands)	$2,356,813	$3,557,151
Medicaid expenditures as a percent of total state general expenditures:		
1975 8.8%		
1980 8.8%		

Table 6.5

Survey results, California

Item	1978	1983
Physicians surveyed	58	56
Medicaid participation		
Percent Medicaid participants	98.2	91.4
Average extent of participation	32.5	24.3
Percent limited participants	22.5	51.3 ***
Medicaid administration		
% of claims returned for additional work	11.0	19.0 **
Average weeks for payment	8.1	8.0
Minutes required for filling out a claim	7.5	8.7
Average ratio of reimbursement to usual fee		
Well child office visit	75.6	64.4 ***
Routine follow-up visit	76.1	56.1 ***
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation		
Not all services covered by Medicaid	28.6	31.7
Too much paperwork	43.1	36.0
Payment delay	48.3	35.4
Complexity of regulations	43.1	45.6
Low payments	66.1	78.8
Unpredictable payments	50.0	60.4
Regulations interfere with high-quality care	25.9	43.5
Broken appointments and other problems	46.6	44.4
Type of patient eligible for Medicaid	----	19.4
Few eligibles in service area	----	2.7

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Both prescription drug benefits and lab and x-ray services are fairly broad in scope. Most drugs are limited to a 100 day supply. Drugs not listed in the state's drug formulary require prior authorization.

Medicaid Reimbursement

Physicians in California have been reimbursed according to a fee schedule based on the California Relative Value Scale (CRVS). These fees, as well as fees for other providers, were reduced by 10 percent in 1982. Physicians receive the maximum rate for EPSDT services, and are permitted to bill separately for immunizations. Selective contracting with physicians will introduce Medicaid reimbursement based on negotiated rates. Before the advent of selective contracting, inpatient hospital services were reimbursed on the basis of reasonable cost or customary charges, and then in 1980, according to the lesser of reasonable cost, customary charges, or an all-inclusive rate per discharge. Currently, hospitals with contracts to provide Medicaid services are reimbursed according to a negotiated rate.

Reimbursement procedures for prescription drugs and for lab and x-ray services have not changed significantly over the five year period. Lab and x-ray services are reimbursed the lesser of the amount billed, the charge to the public, or a fee schedule. Pharmacies receive cost plus a service fee.

Medicaid and Cost Containment

California is not a poor state -- historically, its state revenues are usually well above expenditures, and per capita spending consistently exceeds the national average. But Proposition 13 in 1978, and more recently the federal Medicaid budget cuts, have put significant pressure on the state budget. California's large Medicaid program comprised about 9 percent of state expenditures in 1980 [12].

California has traditionally focused its cost containment efforts on utilization control, and to a lesser extent reimbursement, rather than on eligibility. Its AFDC and Medicaid programs offer broad coverage, and indigent adults received Medicaid benefits although no federal funds were available for their care. California has taken only a few steps to reduce eligibility errors; for instance, it has been one of only a handful of states not to require provider verification of client identification, provider telephone inquiries, or monitoring of client income. Since the passage of OBRA, with its incentives for error reduction, more of these measures have been proposed or adopted.

Utilization control efforts have been far more extensive. California was one of the early states to experiment with HMOs and copayments, during the early 1970s. Prior authorization is required for major services such as inpatient hospital and nursing home care. The state has reimbursed physicians on the basis of a fee schedule since the late 1960s and has been active in hospital rate-setting. Its efforts to cap the rate of increase in hospital per diem payments were stopped after a lawsuit in the mid-1970s; since then it has pursued other alternatives to Medicare reasonable cost reimbursement of hospitals, more recently implementing contracting with hospitals for Medicaid services at a negotiated rate.

The OBRA cuts in federal Medicaid funding and the recession forced some short-term responses to Medicaid budget problems: responsibility for medically indigent adults was transferred to county governments, a few optional services were dropped, the medically needy protected income level was lowered, and reimbursement rates were reduced by 10 percent across the board.

In addition, California has pursued more innovative strategies -- it has taken advantage of new regulatory flexibility to implement bulk purchasing of drugs and supplies, a lock-in for over-utilizers, and primary care case management at several demonstration sites. It has also received two waivers to provide home and community-based services, and selective contracting of physicians, as outlined earlier, is being implemented. In sum, while short-term responses to the budget crisis were necessary, in general California continues to use its considerable resources to develop new methods of service delivery and to take an activist role in rate-setting.

Survey Results

As Table 6.5 shows, Medicaid participation has declined in California. The proportion of pediatricians reporting Medicaid participation fell from 98 to 91 percent between 1978 and 1983, a change very close to statistical significance. Further, the percent of participants limiting their Medicaid involvement increased significantly from 23 percent in 1978 to 51 percent in 1983. The average extent of participation fell from 33 percent in 1978 to 24 percent in 1983, although this change was not significant.

The widening discrepancy between physician fees and Medicaid reimbursements may be partially responsible for declining participation. As Table 6.5 shows, the average percent of fee reimbursed fell significantly between 1978 and 1983, possibly as a result of the 1982 10 percent reduction in fees. In addition, the average percent of Medicaid claims returned for additional work increased significantly, and more physicians reported dissatisfaction with Medicaid program regulations.

Policy Analysis

During 1978-1983 California's children have generally continued to enjoy the benefits of a Medicaid program which extends broad eligibility and services, despite recent OBRA-induced state budget pressures. The problem is not so much whether a poor child will be eligible to receive needed services--a relatively high 61% of California's low income children are covered by the program.

Rather, the problem is where that care is likely to be available. Physician unwillingness to participate in the program has increased between 1978 and 1983, with dramatic increases in those limiting their participation. Recent state changes in Medicaid reimbursement levels probably account in part for increasing dissatisfaction with Medicaid. Indeed, in 1983, 78.8% of the California pediatricians report that low Medicaid payments are a very important problem--up from 66.1% in 1978, and well above the total for pediatricians in all thirteen states.

Low physician participation in Medicaid undoubtedly leaves California's large child Medicaid population to seek care in the traditionally more expensive sites such as emergency rooms, outpatient departments, and clinics. The policies which discourage physician participation in the program are short-sighted, costing the program more money in the long run.

The prospect of contracting, which has already begun for hospital care, may also be discouraging physicians from continuing to participate in the Medicaid program. Contracting will, in effect, segment California physicians into those who do and those who do not serve Medicaid children, presumably on the basis of price competition between the providers for Medicaid contracts. Many California pediatricians are participating in IPAs and PPOs which will be most likely to bid for Medicaid contracts, but unless adequate capitation levels can be assured, competitive pressures may not be sufficient to force pediatricians to enter into the bidding. The implementation of contracting for physicians' services will undoubtedly dramatically alter the current pattern of pediatrician participation in Medicaid. The impact of these changes is impossible to predict. Greater numbers of providers may be able to be attracted into the program under contractual arrangements, particularly if the negotiated capitation levels are sufficiently high.

Colorado

Poverty Population

Colorado has relatively low poverty rates compared to the national average (see Table 6.6). Three out of four of the state's poor children live in urban areas, with almost half in the Denver area. According to 1980 Census figures, most poor families are headed by someone who worked at some point during the year. In 1979, almost two out of five poor families were headed by women.

Medicaid Eligibility

Colorado's Medicaid program provides coverage for all AFDC and SSI recipients as well as a few categories of low-income individuals not receiving cash assistance. The AFDC program features moderate income limits and optional coverage such as AFDC-UP families and women pregnant for the first time. Implementation of OBRA regulations cut AFDC rolls by about 8 percent.

Optional categories of Medicaid eligibility include those who are eligible for AFDC or SSI but not receiving aid, those who would be eligible except for their institutionalized status, and low-income children under the age of 21 for whom the state is taking financial responsibility. This optional coverage has not changed appreciably over the past five years. In order to comply with new Deficit Reduction Act regulations, Colorado will have to extend coverage to all low-income children under the age of 5.

Medicaid Services

In addition to the eight federally mandated services, Colorado's Medicaid program provides 12 optional services. Several have been added since 1978. Recipients who over-utilize the program may be "locked in" to a particular physician or pharmacy.

The requirement that physicians services be approved as "medically necessary" was lifted by 1983. However, some limits remain. Physical exams are covered only when performed as diagnostic evaluations or as admission exams for SNFs or ICFs. Routine physical exams are not covered, except for those provided in connection with EPSDT. The Colorado Foundation for Medical Care, a PSRO, conducts reviews to determine medically necessary hospital stays. Additional days require prior authorization. No changes have occurred in the scope of hospital benefits.

No limits are imposed on lab and x-ray services. Drug benefits are limited to drugs found in the state's formulary, and a few require prior authorization. These regulations have remained unchanged over the five year period. The EPSDT program is limited to federal requirements.

Medicaid Reimbursement

In 1978, physicians were reimbursed according to a fee schedule based on a relative value scale. Since that time, the state has adopted a customary,

Table 6.6

State Medicaid program, Colorado

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 10.1%		
Unemployment rate (March)	6.3%	9.0%
Eligibility requirements		
Maximum AFDC monthly payment	$326	$408
Medically needy annual protected income level	----	----
Proportion of poor children not covered by Medicaid (1980) 54.0%		
Recipients and expenditures		
Medicaid recipients	169,730	147,644
Medicaid expenditures (in thousands)	$155,637	$255,305
Medicaid expenditures as a percent of total state general expenditures:		
1975 6.3%		
1980 6.7%		

Table 6.7

Survey results, Colorado

Item	1978	1983
Physicians surveyed	53	55
Medicaid participation		
Percent Medicaid participants	96.2	90.0
Average extent of participation	12.3	12.9
Percent limited participants	13.3	18.6
Medicaid administration		
% of claims returned for additional work	17.1	9.1 **
Average weeks for payment	5.8	5.0 *
Minutes required for filling out a claim	8.8	5.5 ***
Average ratio of reimbursement to usual fee		
Well child office visit	83.7	73.4 ***
Routine follow-up visit	82.9	79.0
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	7.5	13.8
Too much paperwork	17.0	30.3
Payment delay	13.5	27.8 *
Complexity of regulations	30.2	38.8
Low payments	45.3	54.1
Unpredictable payments	30.2	57.4 ***
Regulations interfere with high-quality care	9.4	21.3 *
Broken appointments and other problems	24.5	25.4
Type of patient eligible for Medicaid	----	15.9
Few eligibles in service area	----	7.5

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

prevailing, and reasonable charges method of reimbursement. However, EPSDT services continue to be reimbursed on the basis of a fee schedule. Cost containment strategies involving reimbursement have been introduced recently. As part of a program introduced in 1983, primary care physicians who achieve savings in outpatient and inpatient hospital costs through their case management activities receive higher Medicaid payments for their services. Hospitals continue to be reimbursed on a prospective basis.

Payment procedures for lab and x-ray services and for drugs have changed little over the five year period between surveys. Lab and x-ray services are reimbursed according to the lowest of submitted charges, the Medicare reasonable charge, or the Medicaid program's fee schedule. Providers of prescription drugs are paid cost plus a dispensing fee, not to exceed charges to the general public.

Medicaid Cost Containment

Colorado has not encountered budgetary pressures as severe as those in other states. Medicaid takes a consistent 5 to 7 percent of state expenditures. While the program's eligibility provisions are not as broad as in some other states, AFDC income limits have not been eroded by inflation to the degree that they have been elsewhere, and SSI-related Medicaid eligibility was recently expanded. About 5 percent of Colorado's population received Medicaid in 1982.

Colorado employs some administrative measures to reduce eligibility errors; training and monitoring of eligibility workers, joint welfare and Medicaid applications, and monitoring of client income were all implemented in 1969 or 1970. It is one of only a few states not to require provider verification of client identification.

Colorado's program requires prior approval for some services. The state recently began 100% review of hospital claims. Since developing its MMIS in 1980, the state has begun a "lock-in" program for overutilizers.

In general, however, Colorado is relying on other methods of utilization control, including primary care case management and physician incentives for reducing hospital costs, incentive payments to nursing homes for controlling administrative costs, and prospective payments for hospitals. It is one of the few states to make extensive use of HMOs during the 1970s -- in 1980, according to the National Governors' Association (NGA), about 5,400 recipients were enrolled in prepaid group practices. Perhaps as a result of these initiatives favoring primary care over hospital care, the state spends fewer than average of its Medicaid dollars on inpatient hospital services.

Survey Results

Medicaid participation has remained relatively stable in Colorado. As Table 6.7 shows, the proportion of physicians with Medicaid patients fell from 96 to 90 percent, and the proportion of Medicaid participants who limit their participation increased from 13 to 19 percent; however, neither of these

changes were statistically significant, and the state's limited participation levels are still low relative to other states. The average extent of participation remained stable.

Oddly, Medicaid reimbursement relative to fees showed some decline during the time that Colorado abandoned its fee schedule and began reimbursing physicians according to customary, prevailing, and reasonable fees. This decline may in part be responsible for the decreases in Medicaid participation. In general, however, Colorado's Medicaid program continues to provide higher reimbursement levels and impose fewer administrative burdens than average, with the three measures of administrative costs becoming significantly more favorable between 1978 and 1983. These factors are likely to be related to the state's relatively high levels of participation.

Given the high participation levels and relatively favorable Medicaid policies, trends in physicians' evaluations of problems with the Medicaid program are surprising. Physicians have become significantly more dissatisfied with unpredictability of payment, with payment delay, and with the professional constraints involved in Medicaid regulations. These substantial increases bear watching.

Policy Analysis

Adequate AFDC and Medicaid eligibility levels and relatively high primary care provider participation in Medicaid have helped to maintain the access of Colorado's poor children to health care between 1978 and 1983. While the recession and federally-initiated OBRA cuts have created budget pressures elsewhere, in Colorado Medicaid has remained a relatively constant proportion of the state budget and few program cuts have been necessary.

Colorado stands out among our study states as one which has emphasized cost control through the manipulation of the financial incentives facing the program's primary care gatekeepers. There has been extensive reliance on HMOs and the new primary care case management system, coupled with prospective reimbursement and some reliance on utilization controls such as the lock-in. Clearly, Colorado is making considerable use of state-of-the-art knowledge about sensible ways to maintain Medicaid costs.

There has been little change in physician participation in Medicaid in recent years. While planners need to monitor these trends, participation is still relatively high. Administrative complexity seems to be increasingly a problem for physicians which could be ameliorated by program administrators. Unfortunately, even the most well-crafted financial incentives will not be able to succeed if they are, in effect, watered down by high collection costs.

The widespread use of primary care case management in Colorado is relatively recent and it is very important that the Colorado Medicaid program recognize that physician reimbursement levels need to be sufficiently high if a cost containment strategy such as this is to succeed. Reimbursement levels have remained relatively high in Colorado in recent years, enabling Colorado's physicians to continue to provide care to low income children. Experience in other states suggests that it is very important that these reimbursement levels remain high if the very promising statewide primary care case management system is to get a chance to succeed.

It might be useful for Colorado program administrators to consider a Massachusetts-type restraint on limited program participation. This is a strategy that can be very useful in maintaining maximal access in a state where reimbursement is likely to remain high enough to keep physicians from withdrawing from the program altogether.

As a final note, access of Colorado's children to the Medicaid program would be improved if the state were to raise AFDC and Medicaid eligibility levels. While the program is more than adequate relative to other states, some 54% of the state's poor children are not covered by the program. Colorado is doing alot to make the Medicaid program more efficient--providing more health care for each dollar spent. The gains achieved through greater efficiency would be well spent if they were plowed back into the program, making more children eligible for Medicaid services.

Georgia

Poverty Population

Like other southern states, Georgia has relatively high poverty rates. Poverty is prevalent in the central city areas, where about a third of all children were poor in 1979. However, many smaller cities and towns also have very high poverty rates. In 1979, about one in four of Georgia's poor children lived in or around Atlanta. Close to 40 percent lived in rural areas. Forty-four percent of Georgia's poor families are headed by women. (See Table 6.8.)

Medicaid Eligibility

Georgia's Medicaid eligibility requirements are fairly stringent -- despite high poverty rates, an estimated 57 percent of all poor children were not covered by Medicaid in 1980. Although AFDC needs and payment standards have kept pace with inflation over the past few years, they are still far lower than average. Georgia does not provide AFDC coverage for two-parent families with unemployed parents or for women pregnant for the first time. OBRA provisions restricting AFDC eligibility cut welfare rolls by about 10 percent when they were implemented in the fall of 1981.

Optional coverage under the state's Medicaid program is extended primarily to individuals in institutions. Financially eligible children for whom the state is assuming responsibility can receive Medicaid; between 1980 and 1983, the state temporarily extended Medicaid coverage to all financially eligible children under 18. To comply with the Deficit Reduction Act, Georgia has had to extend Medicaid coverage to first-time pregnant women in AFDC-type and AFDC-UP-type families, and to low-income children under 5 years of age.

Medicaid Services

In addition to the eight federally mandated services, Georgia's Medicaid program provides 13 optional services. Several have been added since 1978. Beginning in the late 1970s, Georgia imposed copayments of $.50 to $3.00 on all optional services; the copayments were eliminated in November 1982.

In 1983 as in 1978, physician home or office visits were limited to one a month except in the case of medical emergency, acute or chronic illness, referral to a specialist, or other reasons related to the original diagnosis. Greater limits have been imposed upon physician services in a hospital setting, however. In 1982, inpatient hospital services were limited to 20 days per year, and physician hospital visits were covered only within that 20 day period. Prior authorization is required for certain medical procedures.

The EPSDT program is limited to federal requirements. Some limits are imposed on lab and x-ray services. Additional limitations have been imposed on prescription drugs, however. Prescriptions and refills had been limited to a one month supply. In 1982, new regulations limited drug prescriptions to

Table 6.8

State Medicaid program, Georgia

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 16.6%		
Unemployment rate (March)	5.4%	8.1%
Eligibility requirements		
Maximum AFDC monthly payment	$148	$238
Medically needy annual protected income level	----	----
Proportion of poor children not covered by Medicaid (1980) 57.0%		
Recipients and expenditures		
Medicaid recipients	458,957	441,114
Medicaid expenditures (in thousands)	$353,808	$601,436
Medicaid expenditures as a percent of total state general expenditures:		
1975 8.7%		
1980 9.7%		

Table 6.9

Survey results, Georgia

Item	1978	1983
Physicians surveyed	97	91
Medicaid participation		
Percent Medicaid participants	51.6	42.1
Average extent of participation	16.2	11.0
Percent limited participants	14.8	47.9***
Medicaid administration		
% of claims returned for additional work	13.8	26.4
Average weeks for payment	6.6	6.8
Minutes required for filling out a claim	9.1	6.6
Average ratio of reimbursement to usual fee		
Well child office visit	95.2	47.1
Routine follow-up visit	87.6	70.4
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	35.4	34.9
Too much paperwork	36.1	40.1
Payment delay	32.0	43.1
Complexity of regulations	36.2	50.3
Low payments	34.4	63.9
Unpredictable payments	41.5	50.0
Regulations interfere with high-quality care	34.4	32.4
Broken appointments and other problems	23.7	21.8
Type of patient eligible for Medicaid	----	14.3
Few eligibles in service area	----	6.7

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

six per month, with certain exceptions. All over-the-counter products except insulin and diabetic aids were removed from the drug formulary, and new drugs could not be added to the formulary without an evaluation.

Medicaid Reimbursement

Georgia physicians were reimbursed according to reasonable charges until 1980, when the state adopted a fee schedule for physicians services. In 1981, Georgia instituted incentive payments to physicians who performed approved surgical procedures on an outpatient basis. Reimbursement procedures for physicians providing EPSDT services have become more generous. In 1978, physicians were paid for EPSDT according to a flat fee per visit; the state now pays physicians reasonable charges.

Reimbursement procedures for lab and x-ray services have become more restrictive in the last five years. In 1978, providers were paid according to actual charges not to exceed Medicare allowable charges. By 1983, the state had begun to reimburse according to the lower of the actual charge or a state-wide rate. Drugs are reimbursed according to the lowest of cost plus a dispensing fee or the provider's usual and customary charge to the general public. Physicians do not receive a dispensing fee.

Medicaid Cost Containment

Despite limited eligibility and benefits, Georgia's Medicaid expenditures have comprised 9 or 10 percent of its state budget, and nearly half of its budget for health and welfare. Georgia's modest program is relatively more costly than those of many other states because the state is limited in the revenues it can generate. Although Medicaid brings federal dollars into the state, Georgia cannot afford significant expansion of the program.

Many cost-containment measures, such as restrictions on nursing home reimbursement and common Medicare/Medicaid hospital audits, date from the mid-1970s. Attempts to restrict eligibility errors and to recover payments from liable third parties are more recent -- most were initiated in the late 1970s or early 1980s. Georgia has been unusually active in enforcing sanctions against providers or clients who abuse the program.

More recently, the state has continued its efforts to restrict spending for institutional care. The state has received a waiver to continue its Alternative Health Services Project, which has provided preadmission screening and alternatives to institutional care since 1976. The state has also instituted prospective payment for hospitals and 100% review of inpatient hospital claims. An attempt to implement competitive bidding for inpatient hospital services in Atlanta failed in the late 1970s.

Georgia is also exploring alternative delivery and financing systems. The state is considering contracting with HMOs, and has requested a waiver for case management of EPSDT dental services. Survey responses of Georgia pediatricians suggest that contracting with physicians for Medicaid services would not decrease the already low levels of physician participation in the program.

Survey Results

As Table 6.9 shows, Medicaid participation and average extent of participation declined between 1978 and 1983, although neither of these changes are statistically significant. In addition, the proportion of Medicaid participants limiting their involvement in the program rose significantly.

The widening discrepancy between physician fees and Medicaid reimbursement may be partially responsible for these trends. Since 1978, the ratio of Medicaid reimbursements to usual fees has declined significantly, and a greater proportion of physicians expressed dissatisfaction with the levels of payment.

Other Medicaid program characteristics may also be discouraging physician participation. Physicians faulted the unpredictability of payments and the complexity of the regulations. In addition, while other measures of administrative costs remained relatively stable between 1978 and 1983, the average percent of claims returned for additional work increased significantly to more than one-fourth of all claims.

Policy Analysis

The access of Georgia's poor children to health care is a multi-faceted problem of which very low physician participation in Medicaid is a significant part. High rates of poverty, restrictive Medicaid eligibility policies, and limited state revenues combine to create a picture of considerable need and restricted access. Recent cost containment initiatives have been varied, as the state struggles to achieve a more efficient use of limited resources.

An obvious policy option for improving the access of low income children to health care would be to expand Georgia's welfare eligibility levels. The 1984 Deficit Reduction Act will force some program expansion for pregnant mothers and unborn children. State resource constraints make further expansion an unlikely policy choice.

Georgia's participation levels were the lowest of the 13 study states in 1978, and remained low in 1983; moreover, the proportion limiting their involvement in Medicaid rose significantly. The responses of the physicians surveyed show mounting dissatisfaction with Medicaid's low reimbursement and its complexity. Policy changes between 1978 and 1983 have, in all likelihood, contributed to these problems: significant changes occurred in 1982 in the prescription drug benefits and the program's inpatient hospital benefits, and in 1980 the physician reimbursement methods were converted from reasonable charges to a fee schedule. Once relatively generous reimbursement levels have declined substantially, particularly for routine well child care. As reimbursement has declined, it has become less and less financially viable for those few physicians to continue to serve this population, leaving low-income children to seek care in the often more expensive clinic and hospital settings.

Georgia has initiated a variety of cost containment strategies. But on the primary care side, policies that lower physician participation in the

program may, indeed, be unnecessarily increasing program costs by forcing the substitution of more expensive services. The foregoing analysis suggests that promoting Georgia physicians' participation in Medicaid may positively contribute towards achieving the state's overriding cost containment goals by saving the program money in the long run.

Indiana

Poverty Population

Indiana has lower poverty rates than many mid-western states. (See Table 6.10.) Most of the poverty population live in the cities and towns, but poverty rates are highest in the rural areas, and close to one-third of Indiana's poor children live in rural areas. Urban poverty is partly a matter of joblessness -- some smaller cities heavily dependent on manufacturing had high poverty rates even before the recent recession. It is worth noting that the majority of Indiana's poor families families are two-parent families and, as such, are categorically ineligible for welfare.

Medicaid Eligibility

Indiana's Medicaid program covers all AFDC recipients as well as certain SSI beneficiaries and a few noncash recipients. Both AFDC and Medicaid have relatively restrictive eligibility rules, with the result that in 1980, an estimated two-thirds of the state's poor children were not covered by Medicaid. AFDC income and property limits are lower than average, and no coverage is available for AFDC-UP families or for first-time pregnant women. OBRA provisions were implemented gradually following October 1, 1981. Welfare rolls were cut by 10 percent in the following six months.

Indiana's optional Medicaid coverage is limited. Blind and disabled children under 18 years of age are eligible, and since 1978, the state has added coverage for financially eligible children under age 21 in psychiatric facilities, and for 18-21 year olds who meet AFDC requirements except for age. In order to comply with the Deficit Reduction Act, Indiana will have to extend Medicaid eligibility to first-time pregnant women in AFDC-type and AFDC-UP-type families, and to low-income children up to 5 years of age.

Medicaid Services

In addition to the eight federally mandated services, Indiana provides 24 optional services under Medicaid. Copayments were instituted for most optional services in 1981, although the state was prevented by court action from imposing the copayments until 1983.

Indiana is unusual in that few limits are imposed on Medicaid benefits. No limits are imposed on physicians services or on inpatient hospitalization services. In 1982, a prior authorization requirement was imposed for certain procedures such as elective surgery. The EPSDT program is limited to federal requirements. Lab and x-ray services and drug services are not limited, except for the prior authorization requirements imposed on certain prescriptions and over-the-counter drugs.

Medicaid Reimbursement

Medicaid reimbursement for physicians is based on customary, prevailing, and reasonable charges, same as for Medicare. Hospitals receive reasonable

Table 6.10

Survey results, Indiana

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 9.7%		
Unemployment rate (March)	5.6%	12.0%
Eligibility requirements		
Maximum AFDC monthly payment	$275	$316
Medically needy annual protected income level	----	----
Proportion of poor children not covered by Medicaid (1980) 66.0%		
Recipients and expenditures		
Medicaid recipients	235,382	271,677
Medicaid expenditures (in thousands)	$268,202	$596,028
Medicaid expenditures as a percent of total state general expenditures:		
1975 5.8%		
1980 7.8%		

Table 6.11

Survey results, Indiana

Item	1978	1983
Physicians surveyed	77	71
Medicaid participation		
Percent Medicaid participants	90.5	88.3
Average extent of participation	14.5	16.2
Percent limited participants	20.0	24.2
Medicaid administration		
% of claims returned for additional work	10.4	14.3
Average weeks for payment	6.1	4.6 **
Minutes required for filling out a claim	6.1	5.2
Average ratio of reimbursement to usual fee		
Well child office visit	77.8	82.7 **
Routine follow-up visit	83.37	82.4
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	20.8	23.0
Too much paperwork	20.8	26.9
Payment delay	23.4	22.9
Complexity of regulations	32.9	40.3
Low payments	56.6	61.4
Unpredictable payments	43.4	52.6
Regulations interfere with high-quality care	22.1	37.4 **
Broken appointments and other problems	35.1	39.8
Type of patient eligible for Medicaid	----	16.6
Few eligibles in service area	----	5.9

* -- p<.10
** -- p<.05
*** -- p<.01

cost reimbursement, and providers of lab and x-ray services are paid reasonable charges.

Drug reimbursement methods have been modified in the last five years. In 1978, pharmacies received the average wholesale price plus a dispensing fee for legend drugs. Payment for nonlegend drugs was made according to the over-the-counter price. In 1981, legend drugs began to be reimbursed according to the lesser of cost plus a dispensing fee or the provider's usual and customary charge to the public. Nonlegend drugs were reimbursed according to the lesser of cost or the provider's usual and customary charge.

Cost Containment

Medicaid expenses have taken an increasing share of Indiana's budget since the late 1970's. Various cost containment measures implemented during the 1970's held Medicaid spending under 6% of state expenditures even during the 1974-1975 recession. But in Indiana as in many states, recent economic troubles, as well as federal funding cutbacks, have prompted renewed efforts to control Medicaid costs.

Recently, the state legislature and the Department of Public Welfare have focused on the following areas: third party liability, fraud and abuse control, copayments, and waivers. A 1982 law requires insurers to provide information on Medicaid recipients, and to accept the state's claim in lieu of provider-signed forms. Indiana had already been fairly active in fraud and abuse control, but a recent law established a fraud control unit and defined sanctions for violations. Copayments are imposed to the extent permitted by federal law. The state has applied for waivers to provide respite care and home and community-based services to the elderly, and finally, in December 1983, Indiana began to implement a pilot program of HMO contracts for AFDC recipients.

Survey Results

As Table 6.11 shows, physician participation patterns have been rather stable in Indiana. The proportion of physicians participating in Medicaid declined only slightly. Medicaid participants were more likely to limit their participation, but the average percent of patient load covered by Medicaid increased very slightly. None of these changes are statistically significant.

Continuing high reimbursement levels and collection costs that are somewhat lower than average are likely to be responsible for Indiana's relatively high and stable patterns of Medicaid participation. It is worth noting, however, that physicians are significantly more likely than before to criticize the professional constraints involved in Medicaid regulations.

Policy Analysis

The access of low-income children to health care in Indiana is most directly affected by the state's restrictive eligibility policies, which include neither the medically needy nor many among the financially poor who are unable to establish categorical relatedness.

Access to private pediatricians has not been particularly restricted in recent years. Most of the pediatricians surveyed in 1978 accepted Medicaid patients, and continue to do so in 1983.

Indiana's approach to cost containment has not as yet had any noticeable discouraging effect on physicians. Emphasis has been placed on tightening administrative aspects of the program, but not on altering reimbursement methods or levels. This may explain continued physician willingness to participate in the Indiana program. Given that care in physician office settings is likely to be the most efficient use of state resources, it is hoped that this pattern can be maintained. Should it become necessary to take further cost containment measures in the future, it is hoped that these will not hinder physician participation in the program.

Iowa

Poverty Population

Poverty in Iowa is more a rural than an urban phenomenon. Poverty rates are higher in rural areas, where more than half of Iowa's poor children live. While urban poor families tend to be headed by women, many rural poor families are two-parent families who are ineligible for most welfare programs. In 1979, for instance, only 3 percent of poor farm families reported receiving public assistance. Iowa was severely affected by the recession -- poverty is likely to have increased significantly as the state's unemployment rate doubled between 1978 and 1982. (See Table 6.12.)

Medicaid Eligibility

Iowa provides Medicaid coverage for all AFDC and SSI recipients. AFDC income limits are relatively high but have been eroded by inflation in recent years. The AFDC program does not cover pregnant women with no other children, but does include two-parent unemployed families. The state was forced to suspend the AFDC-UP program between May 1981 and July 1982 because of lack of funds. The suspension of AFDC-UP and federally mandated AFDC eligibility cuts reduced welfare rolls significantly, resulting in a decrease in the Medicaid population between 1981 and 1982.

Iowa's Medicaid coverage of noncash recipients has become increasingly important in recent years as AFDC eligibility has been restricted. Most important for children has been the addition in 1981 of Medicaid coverage for all financially eligible individuals under age 21. Since 1978, Iowa has also extended Medicaid coverage to pregnant women with no other eligible children. No additional changes in eligibility provisions will be required for compliance with the Deficit Reduction Act.

Medicaid Services

In addition to the eight federally mandated services, Iowa provides 22 optional services. Several have been added since 1978. The state considered suspending optional services in 1981 because of fiscal pressures, but instead imposed maximum copayments on many optional services. Children up to age 21 and pregnant women are exempt from copayments. Also since 1978, the state has implemented a lock-in program for over-utilizers.

Medicaid places some restrictions on physician services -- services must be deemed necessary by a physician, and routine exams are not covered except in connection with EPSDT, when required by Medicare, or when necessary for employment or for school. Certain procedures are restricted.

Iowa has taken more steps to limit hospital services. Emergency room services are covered only in the event of medical emergency, physician referral, or subsequent hospital admission. Beginning in 1982, hospital

Table 6.12

State Medicaid program, Iowa

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 10.1%		
Unemployment rate (March)	4.6%	9.8%
Eligibility requirements		
Maximum AFDC monthly payment	$395	$419
Medically needy annual protected income level	----	----
Proportion of poor children not covered by Medicaid (1980) 63.0%		
Recipients and expenditures		
Medicaid recipients	167,369	189,462
Medicaid expenditures (in thousands)	$179,911	$312,042
Medicaid expenditures as a percent of total state general expenditures:		
1975 4.3%		
1980 6.9%		

Table 6.13

Survey results, Iowa

Item	1978	1983
Physicians surveyed	37	37
Medicaid participation		
Percent Medicaid participants	100.0	100.0
Average extent of participation	16.6	17.2
Percent limited participants	24.0	12.5
Medicaid administration		
% of claims returned for additional work	14.6	9.5
Average weeks for payment	5.6	6.0
Minutes required for filling out a claim	4.5	5.0
Average ratio of reimbursement to usual fee		
Well child office visit	73.7	75.8
Routine follow-up visit	89.9	80.4 *
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	10.8	22.5
Too much paperwork	37.8	19.0
Payment delay	35.0	26.7
Complexity of regulations	29.7	25.1
Low payments	64.9	55.9
Unpredictable payments	54.1	53.4
Regulations interfere with high-quality care	8.1	15.4
Broken appointments and other problems	32.4	38.5
Type of patient eligible for Medicaid	----	15.8
Few eligibles in service area	----	0.0

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

length of stay has been limited according to diagnosis. In addition, the state began to require certain procedures to be reimbursed on an outpatient basis, and to reimburse for those procedures at outpatient rates.

Coverage of lab and x-ray services and prescription drugs has changed little between 1978 and 1983. Lab and x-ray services are limited to those covered by Medicare. Certain drugs require prior authorization. For most, no more than a 30-day supply is dispensed at once.

Medicaid Reimbursement

Iowa's physician reimbursement method has changed somewhat since 1978, when physicians received reasonable charges up to a maximum allowance. In 1982, they began to be reimbursed according to state-wide rather than regional prevailing fees, with fee increases limited to 5 percent per year. EPSDT reimbursement to physicians is based on reasonable charges. Iowa's Medicaid program reimbursed hospitals on the basis of reasonable cost until 1981, when the state implemented a prospective payment system based on a per diem rate calculated for each hospital.

Lab and x-ray services are reimbursed on the basis of Medicare reasonable cost. In 1978, payment for prescription drugs was based on usual, customary, and reasonable charges, not to exceed cost plus a dispensing fee. By 1983, reimbursement was based simply on cost plus a dispensing fee. The fee can be increased by $.50 if the pharmacy substitutes an equivalent drug resulting in a savings of at least $1.50 per prescription.

In 1982, in response to budget difficulties, the state imposed a 2.5 percent reduction on Medicaid reimbursements except for payments made to physicians, hospitals, ICFs, state mental institutions, and pharmacies. Reimbursements to physicians and certain nursing homes were reduced by 4.2 percent in 1983. These reductions were lifted in 1984.

Cost Containment

Iowa has faced increasingly severe budget problems in the past few years. Expenditures exceeded revenues in 1976 and 1977, and the state's economy was hit hard by the recent recession. Iowa's Medicaid program, which served about six percent of the state's population in 1982, has taken an increasing share of the state's budget. Expenditures have more than tripled since 1975.

Iowa's Medicaid agency has taken an active role in attempting to control costs without limiting eligibility or access to services. Previously, Iowa had employed only a few measures to limit eligibility errors; since the late 1970's, error-prone profiling, monthly issuance/retrieval of Medicaid cards, and regular client status reports have been proposed. An extensive system of copayments was implemented in 1980.

In addition, Iowa has gradually increased limits on hospital length of stay and emergency room use, and implemented hospital rate-setting in 1981. More recently, the state established a Health Data Commission to gather and publicize information from hospitals and third-party payers, in the interest

of containing all health care costs. The state's efforts to encourage use of generic drugs and to reduce unnecessary hospitalization for surgery have been outlined earlier.

The state is also taking steps to control nursing home expenditures, which account for over half of its Medicaid budget. Iowa now gives tax deductions to those who care for elderly or disabled persons in their homes. The state requested but did not receive a Section 2176 waiver for home and community based services in Scott County.

Survey Results

Iowa is unique among the study states in that 100 percent of physicians surveyed in both 1978 and 1983 participated in Medicaid. As Table 6.13 shows, the proportion limiting their Medicaid participation declined, although this change was not statistically significant, and the average percent of patient load covered by Medicaid remained about the same.

Several factors may be involved in Iowa's continuing high levels of Medicaid participation. Iowa's physicians receive higher reimbursements relative to their fees than did physicians in most other states. Other aspects of Medicaid administration, such as percent of claims returned for additional work, payment delay, and time needed to file a Medicaid claim, were on the average less burdensome for Iowa physicians than for those in the rest of the sample. Favorable eligibility trends for children may have encouraged participation as well -- the number of child Medicaid recipients increased by 14 percent between 1978 and 1983.

Policy Analysis

Despite severe budget pressures, Iowa has sought cost containment without limiting eligibility or access to services; indeed, recent AFDC and Medicaid eligibility changes appear to have resulted in an overall improvement in the access of Iowa's poor children to medical care.

Iowa's cost containment strategies have emphasized utilization controls (through copayments and lock-in provisions) and innovations such as hospital rate-setting, and home- and community-based services which are likely to extend the state's limited resources.

Iowa physicians have enjoyed relatively generous reimbursement levels. Perhaps as a result, participation has remained high. Hopefully, the 1983 4.2 percent reduction in physician reimbursement levels will not prove to be discouraging for physicians. It would be unfortunate if continuing high rates of medical care price inflation caused currently favorable reimbursement incentives to deteriorate in coming years.

To date Iowa has succeeded in engaging primary care physicians in the task of caring for the state's poor children. Hopefully, recently initiated cost containment efforts will pay off, enabling the state to avoid the eligibility and reimbursement cuts which have elsewhere been so detrimental to physician participation and the access of children to care.

Maryland

Poverty Population

Maryland has a lower incidence of poverty than most of its mid-Atlantic neighbors. Poverty is most prevalent in urban areas -- in 1979, 83 percent of poor children lived in urban areas, with 65 percent in Baltimore. Fifty-five percent of Maryland's poor families are headed by women. While Maryland's service economy was not as severely affected by the recession as the economies of many other states, unemployment approached 10 percent in 1982, exceeding 10 percent in Baltimore. (See Table 6.14.)

Medicaid Eligibility

Maryland's Medicaid program covers all AFDC and SSI recipients, as well as various optional groups of low-income families and individuals. An estimated 40 percent of the state's poor children were not covered by Medicaid in 1980, which compares favorably with the national figure of 52 percent. The state provides AFDC benefits for two-parent unemployed families and for women pregnant for the first time. Income limits are slightly lower than average, but have kept pace with inflation over the past few years. Most OBRA provisions restricting AFDC eligibility were implemented in October, 1981, cutting welfare rolls by 10 percent during that month.

Maryland's Medicaid program includes optional coverage for various institutionalized individuals and for those eligible for but not receiving public assistance payments. Most important for children is the state's coverage of all financially eligible children under 21. The medically needy program provides Medicaid eligibility for the categorically eligible with incomes slightly above the AFDC or SSI income limits. No expansion of eligibility is required for compliance with the Deficit Reduction Act.

Medicaid Services

In addition to the eight federally mandated services, Maryland's Medicaid program covers 16 optional services. A few have been added since 1978. Until 1983, copayments on drugs were required of all Medicaid recipients; at that time, the copayment requirement was lifted for all except General Assistance recipients, whose medical care is paid for solely by the state.

Physicians services must be medically necessary, or prior authorization must be obtained, in order for the services to be reimbursed. Certain procedures such as cosmetic surgery require prior authorization. EPSDT benefits are limited to federal requirements, and some services require prior authorization. PSRO determination of the medical necessity of hospital services has been required since 1976. In 1982, a 20-day limit was imposed on most hospital stays, and admissions for certain procedures were excluded from coverage.

Lab and x-ray services must be medically necessary. Prescription drugs are covered up to two refills and no more than a 100 day supply. Preauthorization is required for prescriptions exceeding a specified amount, which was raised from $20 to $40 in 1982, and again to $50 in 1983.

Table 6.14

State Medicaid program, Maryland

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 9.8%		
Unemployment rate (March)	7.1%	8.2%
Eligibility requirements		
Maximum AFDC monthly payment	$267	$355
Medically needy annual protected income level	$3800	$4604
Proportion of poor children not covered by Medicaid (1980) 40.0%		
Recipients and expenditures		
Medicaid recipients	306,677	328,012
Medicaid expenditures (in thousands)	$226,284	$446,636
Medicaid expenditures as a percent of total state general expenditures:		
1975 5.8%		
1980 7.8%		

Table 6.15

Survey results, Maryland

Item	1978	1983
Physicians surveyed	64	64
Medicaid participation		
Percent Medicaid participants	95.3	90.9
Average extent of participation	11.5	10.6
Percent limited participants	31.8	44.4
Medicaid administration		
% of claims returned for additional work	13.5	13.7
Average weeks for payment	7.7	6.3 **
Minutes required for filling out a claim	5.8	5.8
Average ratio of reimbursement to usual fee		
Well child office visit	52.0	70.8 ***
Routine follow-up visit	71.9	78.1
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	31.2	28.6
Too much paperwork	31.2	23.6
Payment delay	31.7	28.0
Complexity of regulations	38.1	38.8
Low payments	71.9	70.3
Unpredictable payments	31.2	43.2
Regulations interfere with high-quality care	28.1	25.4
Broken appointments and other problems	28.1	26.6
Type of patient eligible for Medicaid	----	14.6
Few eligibles in service area	----	4.6

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Medicaid Reimbursement

Physicians in Maryland are reimbursed according to the lesser of usual, customary, and reasonable charges or a fixed fee schedule. Inpatient hospital services are reimbursed on a prospective basis according to the lesser of reasonable cost or customary charges.

Lab and x-ray services were reimbursed according to the lesser of customary and reasonable charges or a fee schedule until 1980, when Medicaid began reimbursing according to the fee schedule alone. Legend drugs are reimbursed according to the lesser of usual and customary charges or allowable cost plus a dispensing fee. For over-the-counter drugs, providers are paid the lesser of usual and customary charges, allowable cost plus a dispensing fee, or 150 percent of allowable cost.

Cost Containment

Maryland has not faced the severe budget problems that many states have. The Medicaid share of the state budget has increased gradually over the past few years but is still below average. Maryland's federal match, reflecting the state's higher than average per capita income, has remained at 50%.

Maryland is distinguished by early adoption of some cost containment measures which later became more widespread, including some which were incorporated into the Medicaid amendments of the early 1980's. The state has had a hospital rate-setting program since 1977, copayments (on drugs) since 1976, and a lock-in program for overutilizers since 1978. Rate ceilings for nursing homes date from 1967. Maryland has also made extensive use of prepayment in its Medicaid program; according to the National Governors' Association, in 1980 26,000 recipients were enrolled in prepaid group practices.

Recent cost containment efforts have focused on limitation of inpatient hospital services, third-party liability, and nursing home services. The state has applied for two waivers to provide home and community based services. Maryland has not made extensive use of measures to reduce eligibility errors, but consolidation of AFDC and Medicaid eligibility applications, monitoring eligibility workers' performances, and provider telephone inquires have been proposed recently.

Survey Results

As Table 6.15 shows, Medicaid participation has remained relatively stable in Maryland. The percent of physicians participating in Medicaid has fallen slightly, although this change is not statistically significant. Medicaid participants are more likely to limit their involvement in the program, and the average percent of patient load covered by Medicaid has declined; again, these changes are not significant.

Medicaid participation has not risen despite a significant increase in reimbursement relative to fees and a drop in the number of weeks for payment. Other measures of collection costs associated with Medicaid participation have

remained about the same, as have physicians' evaluations of problems with the Medicaid program. Medicaid participation trends do not appear to relate directly to state policy shifts.

Policy Analysis

A broad service package, generous eligibility provisions, and improving Medicaid primary care reimbursement levels have enabled Maryland's low income children to continue to enjoy relatively good access to medical care. Budget pressures have been relatively less severe in Maryland than elsewhere, in part because of the relatively mild state economic recession and perhaps because of early path-breaking introduction of Medicaid cost containment strategies such as hospital rate setting.

Despite a significant improvement in the ratio of reimbursement to fees, the three Medicaid participation measures have been relatively stable, with statistically insignificant decreases between 1978 and 1983. Because poor children may eventually use more expensive sites of care, Maryland policymakers must continue to be wary of policies which may discourage participation.

In Maryland, trends in Medicaid participation by office-based physicians do not appear to directly relate to recent policy shifts. The relative stability in participation despite significant increases in reimbursement may be attributable to increased physician competition in Maryland which--as our individual level analyses have shown--tends to increase limited participation. The consequences of participation declines may be costly both in dollars and in increased childhood morbidity unless program planners can develop better incentives to participate. Generous prepayment and contracting arrangements might be used in the future to foster greater primary care participation in Maryland's Medicaid program.

Massachusetts

Poverty Population

Poverty in Massachusetts is largely an urban problem: 90 percent of the state's poor children live in urban areas, with 19 percent in Boston alone. Poverty rates in Massachusetts are above average for New England, but low compared to the rest of the country. Smaller cities dependent on manufacturing were especially hard hit by the recent recession, which raised the state-wide unemployment rate close to 10 percent. In 1979, 56 percent of all poor families were headed by women. (See Table 6.16.)

Medicaid Eligibility

Massachusetts's Medicaid program covers all AFDC and SSI recipients, as well as a range of optional groups. Broad welfare and Medicaid eligibility rules have meant that the majority of poor children receive Medicaid -- in 1980, an estimated 28 percent were not covered by Medicaid, compared to 52 percent nationwide. Massachusetts AFDC need and payment standards are relatively high, although they have not kept pace with inflation in recent years. AFDC provides coverage for two-parent unemployed families and for first-time pregnant women.

In addition, Medicaid covers certain individuals in institutions, those who are eligible for but are not receiving cash benefits, and, under a state-funded program, General Relief recipients. Most important for children is the state's coverage of all financially eligible individuals under 21 years of age. The inclusion of unborn children in this category means that pregnant women in low-income two-parent working families can receive Medicaid benefits. The medically needy program provides coverage for categorically eligible individuals slightly above the AFDC or SSI income limits. No changes will be necessary for compliance with the Deficit Reduction Act.

Medicaid Services

In addition to the eight federally mandated services, Massachusetts provides 28 optional services in its Medicaid program. A couple have been added since 1978. Categorically and medically needy recipients are eligible for the same benefits package. A "lock-in" program restricts over-utilizers to the use of one pharmacy.

As of 1982, physician visits are limited to one office, home, or hospital visit per day, although routine preoperative and post-operative visits are not covered. Second opinions and prior authorization are required for certain surgical procedures.

EPSDT services are limited to federal requirements. Prior to 1981, under the EPSDT program Project Good Health, the state contracted with physicians and community centers to provide EPSDT services. Massachusetts ended selective contracting in 1981, but continued to reimburse primary care providers at a special rate for EPSDT services.

Table 6.16

State Medicaid program, Massachusetts

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 9.6%		
Unemployment rate (March)	6.2%	8.0%
Eligibility requirements		
Maximum AFDC monthly payment	$396	$445
Medically needy annual protected income level	$5280	$5340
Proportion of poor children not covered by Medicaid (1980) 28.0%		
Recipients and expenditures		
Medicaid recipients	1,031,995	579,079
Medicaid expenditures (in thousands)	$724,081	$1,338,237
Medicaid expenditures as a percent of total state general expenditures:		
1975 10.8%		
1980 14.3%		

Table 6.17

Survey results, Massachusetts

Item	1978	1983
Physicians surveyed	63	70
Medicaid participation		
Percent Medicaid participants	95.1	95.3
Average extent of participation	20.0	18.5
Percent limited participants	0.0	1.1
Medicaid administration		
% of claims returned for additional work	9.7	7.6
Average weeks for payment	8.2	5.8 ***
Minutes required for filling out a claim	5.4	7.9 *
Average ratio of reimbursement to usual fee		
Well child office visit	81.8	81.7
Routine follow-up visit	77.8	72.4
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	4.8	22.8 ***
Too much paperwork	32.3	44.9
Payment delay	43.5	32.2
Complexity of regulations	38.7	62.4 ***
Low payments	64.5	62.8
Unpredictable payments	32.3	39.1
Regulations interfere with high-quality care	14.5	23.1
Broken appointments and other problems	21.3	20.6
Type of patient eligible for Medicaid	----	13.8
Few eligibles in service area	----	4.3

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Medicaid lab and x-ray services are not limited in Massachusetts. Drug benefits include legend and specific nonlegend drugs, with prior authorization required for some prescriptions.

Medicaid Reimbursement

Physicians are reimbursed according to a fixed negotiated fee schedule. In 1976, the legislature reduced fees for non-primary care physicians by 30 percent, which has since then been restored. In late 1983, the state's rate-setting commission increased reimbursement rates for pediatric office visits from $11.50 - $17.00 to $19.00. EPSDT services are also reimbursed according to a fee schedule. Hospitals are paid according to a per diem rate established on a prospective basis.

Providers of lab and x-ray services are paid on the basis of a fee schedule. Legend and compound drugs are reimbursed according to the lesser of usual and customary charges or cost plus a dispensing fee. Nonlegend drugs are reimbursed according to the lesser of usual and customary charges or 150 percent of cost.

Cost Containment

Massachusetts spends between 10 and 15 percent of its state budget on its extensive Medicaid program. Medicaid expenditures rose sharply between 1975 and 1977, as the number of Medicaid recipients nearly doubled; since then, while the recipient population has fallen again, Medicaid costs have continued to rise. Until 1977, the "federal match" was 50 percent. Since then, it has been increased slightly.

The Medicaid program in Massachusetts provides a wide range of services to a large recipient population -- almost 12 percent of Massachusetts residents in 1982. Prior authorization is required for many services, but Massachusetts is one of few states not to limit or require prior authorization for inpatient hospital services. With some exceptions, the state has focused on administrative measures and reimbursement in order to contain costs. The Department of Public Welfare takes extensive measures to limit eligibility and payment errors -- Massachusetts is one of only a few states to issue photo IDs and to use error-prone profiling. An active fraud control unit conducted 1,700 integrity reviews in 1980. The various limits on nursing home reimbursement date from the beginning of the program, and Massachusetts has used an alternative to reasonable cost reimbursement for hospital services since 1974. As mentioned earlier, physician fees are low -- the fee schedule was last updated in 1974. and in 1976 physician fees for non-primary care were reduced by 30 percent, a cut which has since been restored.

In response to fiscal pressures, the state proposed a 25 percent cut in Medicaid spending in 1981. Various providers including teaching hospitals and clinics formed a Medicaid Task Force which developed the case management plan known as the Commonwealth Health Care Corporation (CHCC). Hospitals, clinics, and private physicians were to have joined together in CHCC in order to provide managed care to Medicaid recipients on a capitation basis. While the

CHCC eventually folded, Massachusetts continues to operate case management on a demonstration basis, and has introduced case management for other groups including certain noninstitutionalized elderly patients.

Other recent cost containment measures include prospective payment for hospitals, incentive payments to reward cost-conscious nursing homes, and an increase in recovery of third party liabilities.

Survey Results

As Table 6.17 shows, patterns of Medicaid participation have been stable over the past five years. Pediatrician participation remained high, and virtually none of the Medicaid participants limit their involvement in the program. Average percent of patient load covered by Medicaid declined by only one percentage point, not a statistically significant change.

The reported ratio of Medicaid reimbursement to usual fees remains relatively high despite the state's use of a fee schedule. Collection costs, as measured by payment delay and percent of claims returned for additional work, are lower than average, although Massachusetts Medicaid claim forms take longer than average to fill out. It seems likely that reimbursement levels and administrative practices, in combination with other policies favorable to primary care, have helped to sustain these high levels of participation. Significant increases in physician dissatisfaction with complexity of regulations and limitations on services bear watching by by state policymakers, however.

Policy Analysis

The low-income children of Massachusetts continue to enjoy widespread access to Medicaid both by virtue of very generous eligibility regulations and high levels of physician participation in the program. Limited participation has, in effect, been outlawed, a unique state strategy for preserving maximal access to physicians participating in the program. This ban on limiting participation, coupled with high levels of participation, means that inappropriate use of expensive emergency room and clinic services is probably much less in Massachusetts than elsewhere.

The review of state cost containment strategies shows a particular sensitivity in Massachusetts to preserving physician participation in the program. Reimbursement cuts were rejected in 1981 because it was believed physician participation would suffer. Similarly, the 1983 fee increase for primary care physicians and EPSDT services is indicative of the state's commitment to fostering provider participation. Massachusetts pediatricians are still troubled by bureaucratic complexity and paperwork, although the Medicaid program is taking some steps to simplify audit procedures.

Although perhaps not as severe as elsewhere, Massachusetts does face fiscal pressure from its large Medicaid program. The state has been a leader in experimentation with case management, prepayment, and contracting -- arrangements which may be able to improve the program's efficiency without discouraging primary care provider participation.

Nebraska

Poverty Population

Nebraska has slightly lower poverty rates than states in other regions of the country. About half of Nebraska's poor children live in rural areas, with 27 percent living on farms, where poverty rates are relatively high. Many of Nebraska's poor families are categorically ineligible for public assistance because they are two-parent families with an employed head. This is especially true in rural areas. (See Table 6.18.)

Medicaid Eligibility

Nebraska's Medicaid program covers all AFDC recipients as well as SSI recipients who meet certain more restrictive Medicaid eligibility standards. The AFDC program includes an AFDC-UP component, and covers pregnant women with no other children. AFDC need and payment standards are slightly higher than average. Most of the federally mandated eligibility reductions were implemented in November, 1981; welfare rolls were cut by 10 percent during this month.

In addition, the state's Medicaid program covers financially eligible children under 21 who are wards of the state, or who are eligible as essential or dependent children under SSI. In 1982, the state added eligibility for pregnant women with no other children and for children 19-20 years of age who would be eligible for AFDC except for newly imposed age limits. The medically needy program extends eligibility to those slightly above the AFDC or SSI income limits. In order to comply with the Deficit Reduction Act, Nebraska will have to add coverage for low-income children up to the age of 5.

Medicaid Services

In addition to the eight federally mandated services, Nebraska provides 22 optional services under Medicaid. Categorically and medically needy recipients are eligible for the same package of benefits. The state has a "lock-in" program for recipients who over-utilize physicians services, hospital services, or drug benefits.

No limits are imposed on physician office visits under Medicaid. EPSDT services are limited to federal requirements. Physician visits for hospitalized patients are limited to one per day. In 1978, hospital stays required certification by a physician of medical necessity; recertification was required after 60 days of hospital care during a 12 month period. Various other limits were imposed on nursery, rehabilitation, and psychiatric care. By 1983, however, these regulations had been replaced with limits based on the "West North Central Region Length of Stay in PAS Hospitals".

No limits are imposed on lab and x-ray services. Prior authorization is required for certain drugs, and a few prescriptions, such as birth control pills, are limited to a given supply.

Table 6.18

State Medicaid program, Nebraska

Item	1978	1983
Socioeconomic indicators.		
Poverty rate (1979) 10.7%		
Unemployment rate (March)	3.8%	7.1%
Eligibility requirements		
Maximum AFDC monthly payment	$370	$420
Medically needy annual protected income level	$5600	$6300
Proportion of poor children not covered by Medicaid (1980) 77.0%		
Recipients and expenditures		
Medicaid recipients	69,159	83,963
Medicaid expenditures (in thousands)	$84,567	$145,962
Medicaid expenditures as a percent of total state general expenditures:		
1975 6.5%		
1980 7.9%		

Table 6.19

Survey results, Nebraska

Item	1978	1983
Physicians surveyed	27	28
Medicaid participation		
Percent Medicaid participants	96.2	98.2
Average extent of participation	16.1	13.4
Percent limited participants	5.9	41.6 **
Medicaid administration		
% of claims returned for additional work	9.5	14.8
Average weeks for payment	4.6	8.2
Minutes required for filling out a claim	7.9	7.7
Average ratio of reimbursement to usual fee		
Well child office visit	96.9	83.5 ***
Routine follow-up visit	98.2	83.2 ***
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	7.7	34.1 **
Too much paperwork	19.2	13.6
Payment delay	19.2	21.9
Complexity of regulations	23.1	28.7
Low payments	11.5	74.1 ***
Unpredictable payments	16.0	65.9 ***
Regulations interfere with high-quality care	15.4	42.3 **
Broken appointments and other problems	57.7	46.9
Type of patient eligible for Medicaid	----	13.9
Few eligibles in service area	----	4.1

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Medicaid Reimbursement

In 1978, Nebraska reimbursed physicians according to usual, customary, and prevailing charges with a maximum set according to a relative value study. The state modified its reimbursement system in 1982, when it began paying physicians the lowest of the submitted charge, the customary charge as determined by Medicaid or Medicare, or the prevailing charge as determined by Medicaid or Medicare. For hospitals, Medicare reasonable cost reimbursement was replaced with a prospective per diem basis of payment in July, 1982.

In 1978, physicians providing EPSDT services were paid usual and customary charges, although the county could contract with providers at a lower rate. In 1982, however, this method was replaced with a maximum allowable fee for complete EPSDT examinations, while other screening and evaluation services were paid according to the modified physician reimbursement method.

Lab and x-ray services were reimbursed according to a fee schedule until 1982, when providers began receiving usual, customary, and prevailing charges. Pharmacies receive cost plus a dispensing fee.

Cost Containment

Nebraska's Medicaid program has in the past been modest in size and scope, serving only about 5 percent of the population and accounting for about 6.5 percent of state expenditures. Some cost containment efforts date from the early 1970's. Recently, however, economic conditions as well as federal restrictions have forced additional cost containment efforts. In 1982, the Appropriations Committee of the state legislature was asked to examine Medicaid services and reimbursement, and to consider lower cost alternatives.

By 1982, Nebraska's Medicaid program completed its phase-out of county financial participation, and administration was consolidated at the state level. Some eligibility restrictions were enacted, in addition to the AFDC cuts mandated the previous year. Limitations and prior authorization were imposed on hospital stays and visits. dental care, and other benefits. In 1982, Nebraska received a waiver to provide alternative care services to the mentally handicapped. The state applied for additional Section 2176 home and community-based services waivers in an attempt to trim nursing home expenses, which account for about half of its Medicaid budget. (According to recent information, these waivers were denied by HCFA.)

In addition, to some extent, the state is cutting back on provider reimbursements. In 1982, Nebraska adopted prospective reimbursement for hospitals and nursing homes. The change in physician reimbursement procedures may have lowered reimbursements to some physicians, although the change was not adopted as a cost-containment measure. More serious cutbacks were threatened by a 1982 bill permitting the Director of Public Welfare to impose a pro rata reduction in reimbursements if Medicaid expenditures exceeded the budgeted amount. This bill, and one which sought to freeze payments to 1982 levels plus a 3.75 percent increase, were declared unconstitutional following suits brought against the Department by provider groups.

Survey Results

As Table 6.19 shows, the percent of physicians participating in Medicaid remained at a very high level between 1978 to 1983. However, among Medicaid participants, significantly more -- 42 percent in 1983, compared with 6 percent in 1978 -- are limiting their participation. The average percent of patient load covered by Medicaid changed little.

The widening gap between Medicaid reimbursement and physicians' usual fees may in part be responsible for the striking increase in limited participation. The ratio of reimbursement to fees declined significantly between 1978 and 1983, and physicians were much more likely to identify low payments as a serious problem. Physicians also expressed significantly more dissatisfaction with limitations on services, unpredictable payments, and the professional constraints imposed by Medicaid regulations.

Policy Analysis

It seems that the Nebraska Medicaid program is at a turning point: it has continued to offer a relatively generous scope of eligibility and benefits despite rising costs and diminished federal funding. However, fiscal pressures have forced the state to begin experimentation with long term care alternatives in an attempt to contain costs. In addition, reimbursement policies have undergone change: an alternate reimbursement method was established in 1982.

Our evidence suggests that Nebraska's pediatricians have responded negatively to the recent reimbursement changes. The proportion who limit their participation has increased very markedly. There have been dramatic increases in the expression of discontent with Medicaid reimbursement levels, which have indeed declined relative to physicians' fees.

Nebraska policymakers need to be aware that further cuts in reimbursement will undoubtedly have the effect of discouraging physician participation in the program. Our analysis suggests that such cost containment policies may well be misguided, causing poor children to seek care in more expensive settings. Moreover, physician services account for a very small part of the state's Medicaid budget; the emphasis on controlling costs of physicians' services seems misplaced.

Larger gains in cost containment are likely to be made through prospective reimbursement of hospitals and the development of long term care alternatives--and Nebraska has begun work in both of these areas. Perhaps savings from greater cost containment in Nebraska's institutional sector can be used to maintain adequate reimbursement of physicians' services, thereby keeping Nebraska's children in the least expensive primary care settings. Moreover, savings might be used to extend Medicaid coverage to more of the 75 percent of the state's poor children who are not currently covered by the program because of categorical ineligibility. These two strategies together would greatly improve the plight of Nebraska's poor children.

New York

Poverty Population

As Table 6.20 shows, poverty rates in New York are higher than the national average. Poverty is largely an urban phenomenon, in fact, almost two-thirds of New York's poor children live in the New York metropolitan area. In central city areas, almost one out of every three children were living in poverty in 1979. Both joblessness and family composition contribute to poverty in New York. In the urban areas, about 60 percent of poor families are headed by women.

Medicaid Eligibility

New York's Medicaid program is broad in its eligibility provisions, although access to Medicaid through AFDC has become more restricted in recent years as the income limits have been eroded by inflation. All AFDC and SSI recipients are eligible for Medicaid. A relatively extensive AFDC program provides coverage for two-parent unemployed families and for women pregnant for the first time; the maximum payment, $515 for a family of four, is higher than average. In 1980, New York adopted more restrictive standards of Medicaid eligibility for SSI recipients seeking coverage, but dropped these standards again in 1982.

In addition to AFDC and SSI recipients, New York's Medicaid program includes several related categories of noncash recipients, including those who are eligible for AFDC and have not applied, those who would be eligible for AFDC if child care costs were paid from their earnings, and those who would be eligible for cash benefits except for their institutional status. Most important for children, since 1978 New York has added coverage for all financially eligible children under 21. The inclusion of "unborn children" in this category means that first-time pregnant women in low-income two-parent working families may receive Medicaid. New York's "medically needy" program provides additional coverage; the protected income level, like the AFDC payment standard, is higher than average. No changes in eligibility provisions will be necessary to comply with the Deficit Reduction Act.

Medicaid Services

In addition to the eight federally mandated benefits, New York provides 29 optional services. Several have been added since 1978. Medically needy recipients are eligible for the same benefit package as the categorically needy. A lock-in arrangement instituted in 1982 allows local social service districts to restrict over-utilizers to one physician and one pharmacy. Until 1982, copayments on drugs were imposed.

The scope of physician services covered by Medicaid did not change over the five years between the two AAP surveys. No significant limits are imposed on physician services. Inpatient hospital benefits have become more restricted, however. The number of hospital rehabilitation days permitted without prior authorization was reduced from 40 to 20, and specified procedures which could be performed safely on an outpatient basis were no longer covered as inpatient hospital benefits.

Table 6.20

State Medicaid program, New York

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 13.4%		
Unemployment rate (March)	8.3%	9.8%
Eligibility requirements		
Maximum AFDC monthly payment	$476	$515
Medically needy annual protected income level	$5000	$6300
Proportion of poor children not covered by Medicaid (1980) 34.0%		
Recipients and expenditures		
Medicaid recipients	2,285,198	2,160,591
Medicaid expenditures (in thousands)	$3,360,717	$6,259,549
Medicaid expenditures as a percent of total state general expenditures:		
1975 15.5%		
1980 17.5%		

Table 6.21

Survey results, New York

Item	1978	1983
Physicians surveyed	54	53
Medicaid participation		
Percent Medicaid participants	85.2	82.2
Average extent of participation	17.9	21.0
Percent limited participants	40.0	49.5
Medicaid administration		
% of claims returned for additional work	13.6	21.9 *
Average weeks for payment	8.8	4.7 ***
Minutes required for filling out a claim	6.5	5.4
Average ratio of reimbursement to usual fee		
Well child office visit	61.1	65.9
Routine follow-up visit	68.7	56.0
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	25.9	33.7
Too much paperwork	38.9	42.2
Payment delay	40.7	36.8
Complexity of regulations	48.1	58.8
Low payments	74.1	75.7
Unpredictable payments	50.0	60.5
Regulations interfere with high-quality care	40.7	32.0
Broken appointments and other problems	25.9	35.3
Type of patient eligible for Medicaid	----	14.1
Few eligibles in service area	----	5.4

* -- p<.10
** -- p<.05
*** -- p<.01

New York's EPSDT program, called the Child Health Assurance Program (CHAP), provides the screening, diagnosis, and treatment services required by federal regulations. No limits are imposed on lab and x-ray services; since 1978, coverage has been extended to CT scans. Medicaid drug benefits are limited to the prescription and nonprescription drugs specified by state regulations. A physician may specify up to five refills. Drug benefits have not changed appreciably since 1978.

Reimbursement

Physicians in New York are reimbursed according to a fee schedule. Physicians providing EPSDT services were paid the lesser of $35 or the established clinic rate until 1980; at that time, physicians providing EPSDT exams began receiving only the established clinic rate. Inpatient hospital services had been reimbursed on a prospective basis according to reasonable cost. In 1983, New York began a three-year experiment with a uniform system to determine prospective per diem rates for Medicare, Medicaid, and Blue Cross.

Reimbursement for lab and x-ray services has remained unchanged over the past five years: providers receive the lesser of actual expenditures or the amount determined by a fee schedule. Reimbursement procedures for pharmacies have changed since 1978 when providers received the lowest of the usual charge to the public, the federally determined MAC, or the EAC plus a dispensing fee. By 1983, the reimbursement was based on the lowest of the usual charge to the public, any sale price in effect at the time of purchase, the price determined by the state Department of Health, or the average wholesale price of the lowest cost alternative form plus a dispensing fee.

Cost Containment

Medicaid's share of New York's state budget increased during the late 1970s despite a slower than average rate of growth in Medicaid expenditures. New York has the most significant local financial participation of any state: half of the state share is paid by county governments. The federal match remained at 50 percent until 1982, when it increased slightly. This increase was offset, however, by the 1981 OBRA cuts in federal funding. New York's costs are high in part because of extensive coverage -- 13.3 percent of the population received Medicaid benefits in 1982 -- but also because of an unusually high average cost per recipient.

Reimbursement levels have been a major target for cost containment efforts. New York was the first state to use an alternative to reasonable cost reimbursement for hospital services -- its rate setting program has been in place since 1970. Some nursing home restrictions, such as rate ceilings and limits on capital costs, date from the beginning of the program. New York physician reimbursement levels are some of the lowest in the country.

Other cost containment measures include various efforts to reduce eligibility errors and to recover payments from liable third parties,most of which were implemented in the late 1970s. A fairly active fraud and abuse control program conducted 749 integrity reviews and 411 full-scale investigations in 1980. A lock-in for overutilizers was initiated in 1979.

New York has also undertaken a variety of demonstration projects, including hospice care, a "nursing home without walls" program, the Monroe County Long-Term Care program, the Suffolk County demonstration of physician reimbursement alternatives, and prospective payment to several hospitals.

Survey Results

As Table 6.21 shows, Medicaid participation has remained relatively stable in New York between 1978 and 1983. The proportion of pediatricians reporting Medicaid participation has fallen slightly from 85 percent in 1978 to 82 percent in 1983. Fifty percent of Medicaid participants limited their involvement in the program in 1983, compared to 40 percent in 1978. However, among pediatricians who do take Medicaid patients, the average percent of patient load covered by Medicaid rose from 18 to 21 percent. None of these changes were statistically significant.

Chief among physicians' dissatisfactions with the Medicaid program is the continuing low level of reimbursement: three out of four pediatricians surveyed reported low payments to be a very important reason for not participating or limiting participation. As Table 6.21 shows, the percent of claims returned for additional work rose significantly to more than one out of five, while the average reported payment delay fell. While New York's Medicaid program has not seen significant changes in regulations, it is possible that administrative measures related to claims processing or to fraud and abuse control may have increased the collection costs of receiving payment from Medicaid.

Policy Analysis

Traditionally generous in eligibility, the New York Medicaid program continues to afford access to a great number of its low-income children. Recently, program administrators have allowed inflation to erode generous eligibility levels -- a passive but nonetheless effective means of reducing program growth in the face of fiscal pressure. These trends have somewhat curtailed children's access to Medicaid, and it is hoped that steps will soon be taken to restore formerly generous eligibility levels.

Although many of New York's pediatricians participate in Medicaid, and do so to a relatively great extent, there is reason for concern in the high proportions who limit their participation. Problems stressed by New York pediatricians include complex regulations and low reimbursement.

With so many poor children eligible for Medicaid, the state has reason to be concerned about paying the high costs of emergency room and clinic care for children who are unable to obtain care elsewhere. Efforts to encourage unlimited participation by primary care providers could save the program considerable amounts of money. More widespread development of prepaid case management programs holds the promise of engaging primary care providers in the program while containing costs. The recently enacted Medicaid Reform Bill, which contains measures to encourage the development of case management and comprehensive health service plans, is a step in the right direction. The Bill also provides for a 30 percent increase in the fee schedule for office-based primary care physicians.

Given the poor economic incentives to participate, it is remarkable that New York's physicians continue to serve Medicaid children to a very great extent. Competition from other providers, the high level of demand from a large Medicaid-eligible population, as well as simple good will may explain the continued high levels of participation, but prepaid case management schemes may enable the state to do more with its limited resources and engender an even greater willingness among physicians to serve low income children.

Oklahoma

Poverty Population

Oklahoma's poverty rates are fairly close to the national average. Poverty is more severe in small towns and rural areas. However, about 60 percent of all poor children live in urban areas. Although unemployment is usually relatively low in Oklahoma, unemployment rates rose sharply in 1982, climbing to almost 9 percent by the summer of 1983. About one-third of Oklahoma's poor families are headed by women. (See Table 6.22.)

Medicaid Eligibility

Oklahoma's Medicaid program covers all AFDC recipients as well those SSI recipients who meet more restrictive eligibility standards. The AFDC program provides modest coverage of the state's poverty population. Need and payment standards are slightly below average. The state's AFDC-UP program was terminated in 1975, and there is no AFDC coverage for pregnant women with no other children. Welfare rolls were cut by 20 percent in the first six months following implementation of the federally mandated AFDC eligibility cuts.

In addition to AFDC and SSI recipients, the Medicaid program covers some optional categories of noncash recipients, including those eligible for welfare but not receiving aid and institutionalized individuals who would otherwise be eligible for welfare. Pregnant women with no other children are deemed AFDC recipients for the purposes of Medicaid eligibility. Most important for children, Oklahoma's Medicaid program covers all financially eligible children under 21. Oklahoma's medically needy program provides additional coverage for categorically eligible individuals above the AFDC or SSI income limit. To comply with the Deficit Reduction Act, Oklahoma will have to extend Medicaid coverage to pregnant women in two-parent unemployed families.

Medicaid Services

In addition to the eight federally mandated services, Oklahoma offers 11 optional services under Medicaid. Medically needy recipients are not eligible for all optional services.

Physician's office and outpatient visits are limited to 4 per month. Since 1980, inpatient hospital visits have been limited to one per day for a period of ten days. With certain exceptions, inpatient hospitalizations are limited to ten days per admission with a 20 day interval between admissions. Oklahoma's Medicaid program imposes a ceiling on the amount of payment for a single disease process. In 1980, the ceiling was raised from $20,000 to $40,000. EPSDT services are exempt from this limit.

While the services available under EPSDT have not changed over the five years between surveys, the periodicity table changed to allow more exams for children at younger ages.

For the most part, benefits under prescription drugs and lab and x-ray services have not changed since 1978. Only pharmacies under contract with the

Table 6.23

State Medicaid program, Oklahoma

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 13.4%		
Unemployment rate (March)	4.2%	8.9%
Eligibility requirements		
Maximum AFDC monthly payment	$309	$349
Medically needy annual protected income level	$5000	$6288
Proportion of poor children not covered by Medicaid (1980) 67.0%		
Recipients and expenditures		
Medicaid recipients	253,185	232,512
Medicaid expenditures (in thousands)	$198,798	$388,659
Medicaid expenditures as a percent of total state general expenditures:		
1975 8.5%		
1980 8.4%		

Table 6.23

Survey results, Oklahoma

Item	1978	1983
Physicians surveyed	58	57
Medicaid participation		
Percent Medicaid participants	94.6	92.8
Average extent of participation	13.8	10.7
Percent limited participants	14.6	35.2 **
Medicaid administration		
% of claims returned for additional work	19.3	15.6
Average weeks for payment	9.9	12.5
Minutes required for filling out a claim	11.0	10.6
Average ratio of reimbursement to usual fee		
Well child office visit	77.8	71.4 *
Routine follow-up visit	77.9	75.1
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	37.9	41.7
Too much paperwork	41.4	41.5
Payment delay	47.4	43.8
Complexity of regulations	50.9	42.0
Low payments	59.6	58.0
Unpredictable payments	51.7	54.4
Regulations interfere with high-quality care	38.6	38.8
Broken appointments and other problems	27.6	33.1
Type of patient eligible for Medicaid	----	13.9
Few eligibles in service area	----	4.9

* -- p<.10
** -- p<.05
*** -- p<.01

Department of Human Services may be reimbursed for Medicaid services. Recipients are limited to three prescriptions or refills per month, and drug supplies are limited to the greater of a 34-day supply or 100 dosage units.

Reimbursement

In Oklahoma, physicians services are and have been reimbursed according to reasonable charges based on Medicare Part B. EPSDT services provided by physicians are reimbursed according to the type of service rendered. At the time of the first survey in 1978, hospitals were reimbursed a prospective interim rate based on per diem costs as reported by the hospital, with an retroactive adjustment made at the end of the fiscal year. In 1983, the state introduced a new reimbursement method, paying hospitals according to the 60th percentile of state-wide available costs updated by an inflation factor. The Oklahoma Hospital Association has opposed this new reimbursement method.

Lab and x-ray services are reimbursed according to reasonable, customary and prevailing charges. Pharmacies have consistently received cost plus a dispensing fee, although the basis for determining cost changed between 1978 and 1983. Dispensing fees have increased steadily.

Cost Containment

Oklahoma's Medicaid program takes up between eight and ten percent of the state's general expenditures. The federal share of the Medicaid budget has declined from about 69 percent in 1970, when Oklahoma had state budget deficits. The state now picks up about 40 percent of Medicaid costs, or about $144.6 million in 1982. Oklahoma was in good economic condition during the recession until the Penn State bank foreclosure in 1982. The subsequent economic down-turn forced some financial retrenchment for the state government.

Oklahoma has gradually introduced many cost-containment measures into its Medicaid program. Some, such as the limit on age of hospital claims, date from the beginning of the program. Others, such as tape-to-tape billing, are quite recent. One factor holding down costs is the small size of its Skilled Nursing Facility (SNF) program which comprised 16 percent of 1980 Medicaid payments nationally. Only 11 Medicaid recipients received SNF services in 1980. Reimbursement procedures are not restrictive, however. According to a 1979 Urban Institute survey, Oklahoma had the highest physician reimbursement of any of our study states. Reimbursement rates for physicians and other services are increased regularly.

Probably the most effective cost-containment measure, however, is the limited scope of the program itself. Modest AFDC income limits and restricted SSI eligibility keep most of Oklahoma's poor off the Medicaid rolls. As the preceding section has shown, Oklahoma offers relatively few optional benefits, and places rather stringent limits on some services it does offer.

Survey Results

As Table 6.23 shows, the rate of Medicaid participation and average extent of participation in Oklahoma remained stable between 1978 and 1983.

Among Medicaid participants, however, the proportion of physicians limiting their participation increased significantly.

One possible factor in these participation trends is the slight decline in the ratio of reimbursement to fees between 1978 and 1983. In addition, the number of weeks between billing the program and receiving payment remained very high. Perhaps decreases in reimbursement and this unusually long payment delay is encouraging physicians to limit their participation, but is not enough to persuade physicians to withdraw from the program altogether.

Policy Analysis

In Oklahoma, the access of poor children to health care is not so much a problem of physician unwillingness to participate in Medicaid as it is a function of state eligibility policies. These policies have severely limited the proportion of Oklahoma's poor children eligible for Medicaid benefits: in 1980 an estimated two-thirds of Oklahoma's poor children were not covered by the program due to restrictive AFDC eligibility levels. Further restrictions were implemented under OBRA in 1981.

The findings of this research show some declines in Oklahoma pediatricians' willingness to participate fully in Medicaid between 1978 and 1983. These trends should be of concern to state policymakers. The recent slight declines in the adequacy of Medicaid reimbursement may have contributed to the increasing numbers who choose to limit their participation in the program.

However, overall, Oklahoma has established and maintained a policy picture which has generally facilitated physician participation in the program: reimbursement has been maintained at adequate levels and the scope of benefits has not been perceived as unduly restrictive, especially under EPSDT.

The foregoing analysis suggests that Oklahoma policymakers need to be mindful of policy actions which may further exacerbate the access problem by discouraging physician participation. But clearly the greatest gains in access would be made by broadening AFDC eligibility: the AFDC need and payment standards could be revised upwards and the AFDC-U program might be reinstated to assist the children of unemployed parents. Recent federal legislation (the Deficit Reduction Act of 1984) will force eligibility in Oklahoma to expand to include more poor pregnant mothers and their unborn children. But by far the greatest impact would be made by state-initiated policies which would bring a greater proportion of Oklahoma's poor children under the Medicaid umbrella.

Pennsylvania

Poverty Population

Poverty in Pennsylvania is largely urban -- nearly half of all poor children live in central city areas, with 40 percent in Philadelphia alone. Roughly half of all poor families are headed by women. Unemployment is a major factor in poverty, particularly in the industrial cities which were hard hit by the recession. (See Table 6.24.)

Medicaid Eligibility

Pennsylvania's Medicaid program is the fourth largest in terms of recipients. All AFDC and SSI recipients are eligible for Medicaid, as well as a variety of optional groups. An estimated 40 percent of all poor children were not covered by Medicaid in 1980. However, the AFDC program, through which most children are eligible for Medicaid, has become more limited in recent years as the needs and payment standards have been eroded by inflation and as federal eligibility restrictions (related to OBRA) have been imposed. The total number of AFDC recipients began to decline in 1981, and by June, 1982, fewer than 580,000 individuals were receiving AFDC, the lowest level in years. The new eligibility restrictions cancelled out the effects of the recession -- the Medicaid population grew by less than one percent between 1981 and 1982.

Optional Medicaid coverage has not changed substantially in the past five years. First-time pregnant women were dropped from AFDC coverage, but as deemed recipients they are still eligible for Medicaid. Most important for children, Pennsylvania has maintained its coverage of all financially eligible individuals under the age of 21. The medically needy program provides additional coverage for those just above the AFDC or SSI income limits. Because of Pennsylvania's AFDC-UP program and its optional coverage, no changes in eligibility regulations are required for compliance with the Deficit Reduction Act.

Medicaid Services

In addition to the eight federally mandated services, Pennsylvania provides 15 optional services under Medicaid. Medically needy recipients are not eligible for the same range of benefits as the categorically needy. Under a "lock-in" arrangement, over-utilizers can be restricted to one physician and one pharmacy.

State Medicaid regulations limit physicians services to procedures listed in the state's fee schedule. Prior authorization is required for certain physical exams. EPSDT services are limited to federal requirements; however, the state has relatively generous provisions concerning the periodicity schedule and the scope of covered lab tests. Limitations on hospital specialty consultations were relaxed somewhat in the last five years. By 1983, specific procedures were required to be performed on an outpatient basis.

Table 6.24

State Medicaid program, Pennsylvania

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 10.5%		
Unemployment rate (March)	7.9%	13.9%
Eligibility requirements		
Maximum AFDC monthly payment	$373	$401
Medically needy annual protected income level	$4500	$5500
Proportion of poor children not covered by Medicaid (1980) 40.0%		
Recipients and expenditures		
Medicaid recipients	1,581,701	1,167,222
Medicaid expenditures (in thousands)	$1,160,208	$1,718,810
Medicaid expenditures as a percent of total state general expenditures:		
1975 5.6%		
1980 9.9%		

Table 6.25

Survey results, Pennsylvania

Item	1978	1983
Physicians surveyed	63	54
Medicaid participation		
Percent Medicaid participants	82.0	68.2 *
Average extent of participation	14.4	15.6
Percent limited participants	67.6	51.5
Medicaid administration		
% of claims returned for additional work	10.8	13.6
Average weeks for payment	10.2	7.0 ***
Minutes required for filling out a claim	6.2	8.3 *
Average ratio of reimbursement to usual fee		
Well child office visit	46.2	55.1 ***
Routine follow-up visit	60.2	69.0 *
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	27.0	32.4
Too much paperwork	39.7	45.0
Payment delay	41.9	34.5
Complexity of regulations	41.9	44.4
Low payments	83.9	78.7
Unpredictable payments	25.8	41.4 *
Regulations interfere with high-quality care	36.7	40.7
Broken appointments and other problems	32.3	33.7
Type of patient eligible for Medicaid	----	14.4
Few eligibles in service area	----	4.9

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

Coverage of lab and x-ray services is limited to procedures listed in the state's fee schedule. The state has upgraded its fee schedule in the past few years, adding several services and increasing reimbursements. Additional restrictions have been imposed on drug benefits in the last five years, with tighter limits on the supply of drugs dispensed per prescription and on the number of refills.

Medicaid Reimbursement

Physicians are reimbursed by Medicaid according to the state's fee schedule. Physician reimbursements in Pennsylvania have typically been among the lowest in the country; recently, however, fees for physician office visits were increased from $8.00 to $11.00. EPSDT services are also reimbursed according to a fee schedule. A cost limit is imposed on physician inpatient hospital charges. Hospitals were reimbursed according to reasonable cost until the recent implementation of prospective payment.

Payment for lab and x-ray services is based on a fee schedule. Until recently, pharmacies received the lesser of usual and customary charge to the public or cost plus a dispensing fee; in 1981, they began to be paid the lesser of usual and customary charges to third parties or cost plus a dispensing fee. This change may mean higher reimbursement in some cases.

Cost Containment

Medicaid costs in Pennsylvania have increased rapidly in the past few years, more than tripling between 1975 and 1982. Medicaid expenditures grew from 5.6 percent to 9.9 percent of total state expenditures between 1975 and 1980. The federal share of Medicaid costs has increased only slightly, to 56.7 percent. Economic recessions in the mid-1970's and early 1980s placed additional strain on Pennsylvania's state budget, resulting in budget deficits for several consecutive years.

According to a recent National Governor's Association survey, Pennsylvania has already implemented many cost containment measures in the area of eligibility, determination, recovery of funds from other sources, and utilization controls. The state's MMIS was certified in 1981, and a lock-in program for over-utilizers was adopted recently.

The Governor's Health Care Cost Containment Task Force, in a 1983 report, issued the following major recommendations for the Medicaid program: (1) prospective payment for hospitals; (2) prepaid capitation plans; (3) recipient copayments on all services at the maximum levels allowed; and (4) bulk purchase of high volume items. Some recommendations are already being implemented. The state received a Section 2175 waiver for a Primary Care Capitation Program; four primary care centers will operate from June 30, 1982, to June 30,1984. Another proposal for contracting was considered and then withdrawn. Competitive bidding for volume purchase is being planned.

The state has taken advantage of other waiver opportunities: as of 1983, it had received two waivers for alternative long-term care to certain ICF-MR patients, and had applied for home and community based services waivers for four other counties. Pennsylvania has reduced its reliance on costly skilled

nursing facilities, which until recently consumed almost a third of its Medicaid budget. Nursing home capital costs are being restricted. The state considered a proposal that Medicaid recipients undergo assessment before receiving long-term care.

Survey Results

The Academy's surveys indicate that the proportion of pediatricians participating in Pennsylvania's Medicaid program declined significantly between 1978 and 1983. However, fewer Medicaid participants are limiting their involvement in the program, although this change is not statistically significant, and the average percent of patient load covered by Medicaid has remained relatively stable. (See Table 6.25)

These contradictory findings may be related to trends in Pennsylvania's Medicaid program. The time required to complete Medicaid forms increased significantly between 1978 and 1983. On the other hand, the ratio of reimbursement to fees improved significantly between 1978 and 1983, and the average payment delay decreased. Perhaps the administrative "costs" of Medicaid participation have caused some physicians to drop out of the program entirely, while for those who continue to take Medicaid patients, full participation is more viable financially than it was in the past.

Policy Analysis

Pennsylvania is a state which has been struggling with rapidly rising Medicaid program costs. A two-pronged policy approach has been adopted: active pursuit of cost containment strategies and passive reduction of numbers of eligibles through a failure to raise eligibility levels. The former strategy will, hopefully, enable the state to gain greater program efficiency, but the latter has greatly restricted the access of low income children to health care.

The participation picture is mixed; fewer physicians are participating in Pennsylvania's program, while other measures of participation have not changed significantly.

It appears that earnest efforts have been made to improve the physician reimbursement levels in Pennsylvania. Periodic increases in the fee schedule have apparently been helpful and may be encouraging more full participation in Medicaid. However, there is much room for improvement in the financial incentives for Pennsylvania pediatricians to participate in the program. Moreover, pediatricians are troubled by paperwork, unpredictable payment, and the complexity of Medicaid regulations.

Historically, the Pennsylvania program has had relatively generous eligibility policies. In all probability, the electorate's commitment to the poor continues as evidenced by the fact that welfare eligibility has not been cut, per se, during the recent period of fiscal pressure. Rather, policymakers have merely neglected the program, allowing its eligibility levels to erode in relation to inflation. Perhaps with improving economic

conditions and greater control of Medicaid costs, state policymakers wil be able to afford to once again extend eligibility to more of Pennsylvania's poor children.

However, higher than necessary costs will continue to be borne on behalf of these children unless more pediatricians can be encouraged to participate. This can be accomplished by improving the economic incentives to participate: raising Medicaid reimbursement levels and reducing the burden of the program's paperwork. The currently contemplated prepaid capitation plan holds great promise and state policymakers should by all means capitalize on the predisposition of Pennsylvania physicians to move in this direction. However, such a plan can only succeed if capitation rates are set sufficiently high to attract physicians into the program, thereby shifting children's services from the higher to the lower cost sites of care.

Tennessee

Poverty Population

Like most southern states, Tennessee has higher than average poverty rates. Poverty is most severe in the central city areas. However, poverty is also widespread among Tennessee's rural population -- about 40 percent of all poor children live in rural areas. Unemployment rose sharply in 1982, and was generally higher in rural areas and small towns. Half of all urban poor families and one-fifth of all rural poor families were headed by women. (See Table 6.26.)

Medicaid Eligibility

Tennessee's Medicaid program covers all AFDC and SSI recipients. While AFDC eligibility standards are fairly stringent, with low income limits, Medicaid regulations are broader. In 1980, an estimated 56 percent of the state's poor children were not covered by Medicaid. Tennessee's AFDC program covers first-time pregnant women, but has no AFDC-UP program. Most of the OBRA eligibility restrictions were implemented in October, 1981. Welfare rolls were cut by 17 percent during that month.

Optional Medicaid coverage includes certain institutionalized individuals as well as certain financially eligible children under age 20 -- those for whom the state is assuming financial responsibility, those with special diagnoses, disabled children, and those under 21 in psychiatric care. The state's inclusion of "unborn children" in this category allows first-time pregnant women in low-income two-parent families to receive Medicaid benefits. Tennessee's medically needy program extends Medicaid benefits to certain categorically eligible individuals slightly above AFDC or SSI income limits. In order to comply with the Deficit Reduction Act, the state will have to provide Medicaid coverage for low-income children up to the age of 5.

Medicaid Services

In addition to the eight federally mandated services, Tennessee provides 14 optional services under Medicaid. Regulations restricting optional services for certain categories of medically needy recipients were struck down by the courts in 1982; currently, medically needy recipients (receive/do not receive) the same benefits as the categorically needy. A "lock-in" program implemented in 1982 allows the state to restrict over-utilizers to one physician and pharmacist.

Physicians services have become more limited in the past few years. At the time of the first survey, the state required prior approval for unusual elective surgery only. In 1981, physician office visits were limited to 24 per fiscal year. In addition, inpatient hospital days were limited to 20 per fiscal year; the limit was reduced to 14 days the following year. Friday and Saturday hospital admissions were not permitted except in the event of emergencies or scheduled surgery within one day of the admission.

Table 6.26

State Medicaid program, Tennessee

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 16.4%		
Unemployment rate (March)	6.0%	12.6%
Eligibility requirements		
Maximum AFDC monthly payment	$148	$154
Medically needy annual protected income level	$2400	$2460
Proportion of poor children not covered by Medicaid (1980) 56.0%		
Recipients and expenditures		
Medicaid recipients	347,388	341,243
Medicaid expenditures (in thousands)	$263,987	$508,566
Medicaid expenditures as a percent of total state general expenditures:		
1975 5.4%		
1980 9.8%		

Table 6.27

Survey results, Tennessee

Item	1978	1983
Physicians surveyed	84	81
Medicaid participation		
Percent Medicaid participants	78.0	83.5
Average extent of participation	8.9	11.1
Percent limited participants	41.0	42.6
Medicaid administration		
% of claims returned for additional work	11.2	17.4 **
Average weeks for payment	5.3	5.2
Minutes required for filling out a claim	7.8	5.7 **
Average ratio of reimbursement to usual fee		
Well child office visit	73.6	74.8
Routine follow-up visit	72.5	77.6
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	35.4	35.8
Too much paperwork	36.6	37.6
Payment delay	25.3	45.2 ***
Complexity of regulations	30.5	48.3 *
Low payments	65.9	68.7
Unpredictable payments	40.7	54.6 *
Regulations interfere with high-quality care	39.8	28.4
Broken appointments and other problems	17.1	18.9
Type of patient eligible for Medicaid	----	14.3
Few eligibles in service area	----	4.9

* -- $p<.10$
** -- $p<.05$
*** -- $p<.01$

EPSDT services are limited to federal requirements. However, eligibility for EPSDT services extends up to the age of 21, rather than ending at age 18.

Lab and x-ray benefits are limited to services provided on 30 occasions per year. Limits on the number of prescription refills and on supplies of drugs dispensed were imposed in 1980 and 1981.

Medicaid Reimbursement

Physicians in Tennessee are reimbursed according to reasonable, customary, and prevailing charges, however the formula for deriving Medicaid payments has been modified several times over the past five years. Prior to 1979, physicians received a flat fee for EPSDT services, plus an additional diagnostic fee. By 1981, however, the flat fee of $20 had been reduced and physicians received an additional developmental assessment fee and were allowed to bill separately for immunizations and lab tests.

Reimbursement for lab and x-ray services is based on usual and customary charges. Prescription drugs are reimbursed according to cost plus a dispensing fee, not to exceed the provider's usual and customary charge.

Cost Containment

Tennessee's Medicaid program has taken a greater share of the state budget since the mid-1970's, expanding from 5.4 percent to a 9.8 percent of state expenditures between 1975 and 1980. These budgetary problems were exacerbated by the recession and by a declining federal match. Poverty rates are high in Tennessee, and despite somewhat restrictive eligibility criteria and an AFDC income limit which has declined in real terms over the decade, almost 8 percent of Tennessee's population received Medicaid in 1982.

In 1976, after budgetary problems stemming from the recession, Tennessee implemented most of its measures to reduce eligibility errors; these measures, along with relatively simple eligibility rules, have given the program error rates which are lower than average. Third party liability efforts also began at this time.

More recent efforts have focused on utilization controls. Tennessee has added limited on hospital services, drugs, and physician visits in the last five years, although prior authorization for hospital services is still not required. A lock-in for overutilizers was instituted in 1982. No copayments are required. Reimbursement for physicians, dental services, lab and x-ray, and other services have also been limited, although Tennessee has not attempted to cut its costs by changing the basis of physician reimbursement. The state implemented a cost-based prospective payment system for inpatient hospital services beginning on or after October 1, 1984. Under this system, a fixed per diem rate is determined for each hospital from a base year cost report.

In addition to these efforts, Tennessee has also received several waivers for case management and prepayment. The state is contracting with the Tennessee Primary Care Network, which enrolls providers into a health plan on a prepayment basis, for the care of AFDC-related recipients in one rural and

two urban areas. In a second program in Memphis and in Maury County, physicians receive a monthly fee for case management while being reimbursed on a fee-for-service basis. Tennessee also has a couple of waivers for home and community based services, including case management.

Survey Results

As Table 6.27 shows, Medicaid participation in Tennessee has remained relatively stable. Both the rate of Medicaid participation and the average percent of patient load covered by Medicaid increased slightly between 1978 and 1983. Among Medicaid participants, the percent limiting their Medicaid participation increased only slightly. None of these changes are statistically significant.

One factor in this stability in Medicaid participation patterns may be the improvement in Medicaid reimbursements relative to fees. The 10 percent increase in the number of child recipients may also have had some effect on extent of participation. These favorable trends should be interpreted with caution, however. Physician dissatisfaction with the complexity of Medicaid regulations and with the delay and unpredictability of Medicaid payments has increased sharply in the last five years, perhaps reflecting administrative/ cost containment strategies such as the lock-in or the new limits on physician services.

Policy Analysis

The access of Tennessee's children to health care is greatly affected by the state's widespread poverty and relatively low AFDC eligibility levels. Although the state has a medically needy program it does not function as a very large safety net: the protected income level is low and services are more limited than for the categorically needy. Expanded eligibility criteria would greatly improve the plight of Tennessee's poor children.

Rising Medicaid costs, recession, and the declining federal match have strained Tennessee's resources. Responses have included an emphasis on utilization control as well as some experimentation with case management. "Big ticket" innovations such as hospital rate setting have only very recently begun. Minor changes have occurred in physician reimbursement methods, but pediatrician reimbursement levels appear to have improved somewhat in recent years.

The lack of radical program changes and continuing positive participation incentives have resulted in stable Medicaid participation by physicians. These trends bode well for those of Tennessee's children who can obtain Medicaid eligibility. Unfortunately, their numbers are relatively few. Perhaps greater experimentation with institutional cost control would enable the state to make more resources available for children's primary care.

Texas

Poverty Population

Poverty rates in Texas are typical of the south and southwest. In the central cities, as in smaller towns, about one out of five children were poor in 1979. Four out of five poor children live in urban areas. Unemployment, usually low in Texas, became a more serious problem during the recent recession, rising to over 10 percent in some Texas cities. Only about a third of Texas's poor families are headed by women -- as a result, most are categorically ineligible for public assistance. (See Table 6.28.)

Medicaid Eligibility

Medicaid in Texas covers all AFDC and SSI recipients, along with a few optional categories. In the past, as a result of low AFDC income limits and restrictive regulations, most poor children could not qualify for Medicaid -- an estimated 75 percent of all poor children were not covered by Medicaid in 1980. The AFDC program does not cover AFDC-UP families or women pregnant for the first time. A very recent increase in AFDC need and payment standards together with an expansion of categorical eligibility have changed this picture somewhat.

Optional coverage under Medicaid includes certain institutionalized individuals, as well as financially eligible children under age 21 who are wards of the state. To comply with the Deficit Reduction Act, Texas extended Medicaid coverage to first-time pregnant women in AFDC-type or AFDC-UP-type families and to financially eligible children under the age of 5.

Medicaid Services

In addition to the eight federally mandated services, Texas's Medicaid program provides 14 optional benefits. Several have been added or expanded since 1978. A "lock-in" program allows the state to restrict over-utilizers to use of one physician and one pharmacist.

Medicaid covers all "reasonable and medically necessary" physicians services. With certain exceptions, cosmetic surgery is not covered, and routine physical exams are also excluded except in connection with EPSDT or family planning services. EPSDT services are limited to federal requirements. EPSDT dental services were cut back in 1979 following budget reductions, but were reinstated in 1982 following litigation. Texas imposes a 30-day limitation on hospital days per spell of illness, and requires a 60-day interval between covered hospital admissions.

Lab and x-ray services and prescription drug benefits have not changed over the five years between surveys. Medicaid covers only drugs listed in state regulations; Medicaid patients may receive three prescriptions or refills per month, and up to five refills within a six month period.

Table 6.28

State Medicaid program, Texas

Item	1978	1983
Socioeconomic indicators		
Poverty rate (1979) 14.7%		
Unemployment rate (March)	4.7%	8.7%
Eligibility requirements		
Maximum AFDC monthly payment	$140	$178
Medically needy annual protected income level	----	----
Proportion of poor children not covered by Medicaid (1980) 75.0%		
Recipients and expenditures		
Medicaid recipients	668,188	680,129
Medicaid expenditures (in thousands)	$730,142	$1,316,685
Medicaid expenditures as a percent of total state general expenditures:		
1975 7.9%		
1980 8.5%		

Table 6.29

Survey results, Texas

Item	1978	1983
Physicians surveyed	79	74
Medicaid participation		
Percent Medicaid participants	79.2	77.5
Average extent of participation	12.1	9.0
Percent limited participants	38.9	50.0
Medicaid administration		
% of claims returned for additional work	14.2	15.4
Average weeks for payment	5.8	6.2
Minutes required for filling out a claim	8.3	7.8
Average ratio of reimbursement to usual fee		
Well child office visit	81.2	60.6 ***
Routine follow-up visit	85.7	74.8 **
Evaluation of state Medicaid program		
Percent rating each problem as a "very important" reason for not participating or limiting participation in Medicaid		
Not all services covered by Medicaid	37.2	42.4
Too much paperwork	36.7	44.1
Payment delay	38.5	38.4
Complexity of regulations	49.4	55.2
Low payments	62.0	66.2
Unpredictable payments	56.4	58.9
Regulations interfere with high-quality care	43.6	45.6
Broken appointments and other problems	27.8	39.2
Type of patient eligible for Medicaid	----	16.4
Few eligibles in service area	----	5.3

* -- p<.10
** -- p<.05
*** -- p<.01

Medicaid Reimbursement

Physicians in Texas are reimbursed by Medicaid according to reasonable charges. From 1972 to 1980, EPSDT screening exams were performed by the Texas Department of Health under contract with the Medicaid program, and were reimbursed according to cost. In 1980, the state began to reimburse both public and private providers for EPSDT screening services. Both receive a flat fee of $30.00 per screening exam, with an additional $6 permitted for follow-up visits. However, lab tests are still provided by the Department, and are reimbursed according to cost.

Inpatient hospital and lab and x-ray services are paid on the basis of Medicare reasonable cost. Until recently, pharmacies had received the lesser of cost plus a dispensing fee or usual and customary charges for both legend and nonlegend drugs. As of 1983, however, nonlegend drugs were being reimbursed at the lesser of usual and customary charges or 150 percent of the acquisition cost. Because of extensive revisions of the Texas Pharmacy Laws in 1981, the state discontinued payments to physicians for dispensing drugs.

Cost Containment

The Medicaid program in Texas has consistently taken between eight and ten percent of total state expenditures over the past few years. However, in terms of eligibility and services, Texas's Medicaid program is rather limited. Only 4.4 percent of the state population received Medicaid in 1982, half of the national average.

Many administrative measures to reduce eligibility errors were implemented in the late 1960s and early 1970s. Because of these measures, and because of the relatively simple eligibility criteria, Texas has rather low error rates.

More recent cost containment efforts have focused on recovery of payments from liable third parties and on utilization control measures, including the drug copayments (discontinued in 1982) and the lock-in for overutilizers. Hospital admissions and discharges and frequent readmissions are being carefully monitored, with payment denied for unnecessary services. In addition, Texas is requiring prior authorization for certain nonemergency surgery.

In general, Texas has focused its recent cost containment efforts on automation and minor adjustments to a carefully monitored program. The state has applied for a few waivers in order to introduce home and community based services and a few other specific programs, but unlike some states has not sought waivers for alternative health care finance and delivery systems such as prepayment and case management.

Survey Results

As Table 6.29 shows, the proportion of Texas pediatricians participating in Medicaid has remained fairly stable. Among those who take Medicaid patients, the proportion who limit their participation has increased significantly, and the average percent of patient load covered by Medicaid has fallen; however, these changes are not statistically significant.

Medicaid participation has changed little despite significant declines in the ratio of Medicaid reimbursement to physicians' usual fees. Measures of the administrative costs associated with Medicaid have remained stable. It is worth noting, however, that Texas physicians are more dissatisfied than physicians of other states with certain aspects of their Medicaid program, including the limited scope of benefits, time-consuming paperwork, and the complexity of Medicaid regulations.

Policy Analysis

Widespread poverty and a very limited AFDC program greatly limit the access of Texas' poor children to health care. It is heartening to note recent state initiatives to extend Medicaid coverage to pregnant mothers and low income children. This will help the access situation in Texas.

Although little change in Medicaid participation is evident in Texas, policymakers will need to monitor trends as further cost containment measures are implemented. While there have been few drastic program changes in recent years, many physicians do complain of bureaucratic complexity, unpredictable payments, and low fees. Perhaps increased reliance on automated claims payment in Texas have intolerably increased collection costs faced in treating Medicaid patients. State administrators might try to alleviate these problems by better educating physicians in filing claims and by minimizing paperwork as much as possible.

Declining fees are undoubtedly another important factor in the current situation. While the method of reimbursement remains unchanged, the ratio of reimbursement to current usual fee has fallen significantly. Multivariate analyses suggest that efforts to upgrade reimbursement may prevent decreases in participation, or even encourage more physicians to accept Medicaid patients. Continued erosion of Medicaid reimbursement may eventually leave those few children eligible for Medicaid to relatively more expensive sites of care.

Synthesis of Case Studies

The period 1978 through 1983 was turbulent for state Medicaid programs. Under President Reagan's leadership Congress fought the battle against recession and the federal budget deficit by passing legislation such as OBRA and TEFRA. The legislation sought to lower AFDC eligibility levels and to limit federal financial participation in AFDC and Medicaid. In so doing, it put the states under great pressure to contain their costs under these programs. Recession and the federal budget cuts created budget pressures which forced many states to look for new ways to contain expenditures--at least until the promised economic recovery might begin to take effect. These factors--recession, federal cutbacks, and rising state budget pressures--in the turbulent environment of the late 1970s and early 1980s.

The state case studies enable us to examine separately the responses of each of our thirteen study states to this turbulence. We are struck, first, by the highly individualized responses of each state to the unique situation it faced during this time period. While under the influence of the same federal legislation, factors such as state history, the state population's sociodemographic characteristics, and the state's political and economic realities led to highly individualized adaptations to conditions prevailing during this period.

While generalizations from the case studies are therefore difficult, certain common themes emerge. First, we find that most of our thirteen states avoided making deep or lasting cuts in Medicaid eligibility during the 1978 to 1983 period. All made the mandated OBRA cuts in AFDC eligibility but, even with the new flexibility in Medicaid coverage granted by OBRA, few initiated eligibility cuts beyond those mandated. A few states (such as Iowa, Massachusetts, New York, and Pennsylvania) allowed income eligibility levels for existing categories of eligibles to be eroded by inflation. A strategy of neglecting eligibility levels during a period of inflation is a passive and effective method of reducing the number of program eligibles. It is, presumably, more politically viable than deleting whole categories of eligibles. (And, it is simple enough to accomplish subsequent program expansion by merely raising eligibility levels when the economy permits.)

Examples of deleting categories of eligibles entirely are very few in our case studies, and often those same categories were subsequently reinstated. For example, New York deleted and subsequently reinstated certain SSI-related Medicaid eligibles during this period. Similarly, Iowa temporarily suspended its AFDC-UP program and California avoided wholesale eligibility cuts by transferring responsibility for its medically indigent adults from the state to the counties. However, one atypical example of a genuine eligibility cut was California's reduction of its medically needy protected income level in 1982.

A second theme emerges from the case studies with regard to Medicaid covered services. Very few states cut their covered services and, in fact, seven of the thirteen states added services (see California, Colorado, Iowa, Maryland, New York, Oklahoma, and Texas). Often, the additions were services which, if substituted for existing services, would result in reduced program costs. Coverage of hospital based home care and generic drugs are examples. It is, nonetheless, notable that states would initiate any program expansions during a time of such extreme fiscal pressure.

While few services were deleted, we note other changes in covered services that were taking place during this period: there was a much greater emphasis placed on utilization controls than had previously been the case. Many states imposed new limitations on the amount, scope and duration of covered services. (See, for example, California, Iowa, Maryland, Georgia, Massachusetts, Nebraska, Pennsylvania, and Tennessee.) And, many states required more extensive use of prior authorization than had previously been the case. (See, for example, Maryland, Massachusetts, Nebraska, Pennsylvania, and Texas.) Moreover, lock-in programs designed to curtail over-utilization proliferated; 10 of our 13 study states were using lock-in programs by the end of 1983 (all but Indiana, Georgia, and Oklahoma). Finally, another form of utilization control--copayments--also increased during this time period, particularly in California, Indiana, Iowa, Maryland, and Pennsylvania. In summary, fiscal pressures did not so much result in wholesale deletion of Medicaid services. Rather, they brought about a variety of state initiatives to gain greater control over the use of Medicaid services and to ensure that such use was appropriate and efficient.

Great creativity is apparent in the responses of the study states to the various pressures of the late 1970s and early 1980s. In many states we see innovative responses designed to gain control of rising program costs--particularly through the expanded use of reimbursement incentives. Prospective reimbursement for hospitals is the most dramatic example, instituted during this period by Massachusetts, Iowa, Georgia, Nebraska, Pennsylvania, and Tennessee. Another example is expanded use of reimbursement incentives to encourage outpatient surgery, evident in Indiana, Georgia, Iowa, and Pennsylvania. Case management programs designed to control primary care use were instituted in several states including Colorado, Maryland, Massachusetts, New York, and Tennessee, and several states began the widespread use of prepayment plans for Medicaid eligibles. (See, for example, Colorado, Pennsylvania, Maryland, and Tennessee.) Capitation payment systems became more common and some states began experimenting with risk-sharing arrangements aimed at improving primary care cost containment incentives.

Some changes also occurred in the management of state Medicaid programs, particularly in efforts to reduce eligibility errors, to control fraud and abuse, and to recover payments from other third parties who might share the liability for a Medicaid eligibles' medical costs. Several of our study states initiated vigorous efforts in these areas, hoping to achieve a higher level of program efficiency.

Occasionally, states did take some drastic measures in response to fiscal pressures. For example, several states instituted dramatic cuts in their reimbursement of Medicaid providers during this period. These included California, Iowa, Massachusetts, and Nebraska. However, on the whole, the study states showed a preference for cutting and/or restructuring Medicaid reimbursement over cutting either program eligibility or benefits.

As a result, many of our worst fears for the Medicaid-eligible population were not realized. While many lost their AFDC and Medicaid eligibility as a result of OBRA, the states did not generally go any further than OBRA required in reducing eligibility or covered services. To this extent, at least, access to medical care was preserved during a period of severe fiscal pressure.

Moreover, as was noted in Chapter 1, the Deficit Reduction Act of 1984 required expansions of state Medicaid eligibility in certain areas which are of particular benefit to low income pregnant women and young children. Our analysis shows that new Medicaid coverage is required in many of our study states as a result of the Deficit Reduction Act, including Colorado, Georgia, Indiana, Nebraska, Oklahoma, and Tennessee. Assuming the full implementation of the requirements of the Deficit Reduction Act by these states, the future should bring even greater access to health care than was previously available to these groups.

Expanded reliance on cost containment through manipulating reimbursement incentives also has the potential to expand access through the more efficient deployment of state Medicaid resources. However, our state case studies emphasize that this strategy may have its unintended costs as well. We have seen that in many states recent reimbursement cuts have meant a decline in primary care providers' willingness to make their office-based services available to Medicaid-eligible children. To the extent that these children do continue to receive Medicaid services, it is often in unnecessarily expensive sites of medical care such as hospital emergency rooms and outpatient clinics.

The case studies suggest that the states need to find a balance between necessary alterations in primary care reimbursement incentives and discouragement of physician participation in the program. Schemes such as prepayment, capitation, risk sharing, and case management are likely to achieve sought after cost reductions, but only if primary care providers can be convinced to participate in these innovations. The case studies provide enough evidence to suggest that simultaneous pursuit of both cost containment and maximum physician participation are not mutually exclusive. However, the states must be farsighted enough to anticipate that high collection costs and low capitation payments will discourage physicians, and bold enough to avert these problems. Several states appear to making headway in this regard, including Colorado, Pennsylvania, Maryland, and Tennessee.

In summary, our state case studies suggest that during the 1978 to 1983 period large-scale Medicaid eligibility and service reductions were avoided in favor of increased utilization control, short-term reimbursement reductions, and long-term reorganization of reimbursement incentives to favor Medicaid cost containment by providers. There is now more widespread use of prepayment and primary care case management, strategies which hold promise for cost containment and which are likely to be implemented by more state Medicaid programs in the future. While many of these programs are new, our case studies suggest that they can be structured in ways which foster pediatrician participation and, in so doing, avert the unnecessary costs of care rendered in emergency rooms and outpatient clinics.

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9. Poverty rates and other socio-economic characteristics in this section and in subsequent state report summaries are drawn from the state "General Social and Economic Characteristics" volumes of the 1980 U.S. Census. Unemployment rates are from Employment and Earnings, a monthly publication of the Bureau of Labor Statistics.

10. Figures on Medicaid recipients are taken from unpublished HCFA data, based on information provided annually by state Medicaid agencies.

11. Figures on AFDC recipients are drawn from the Social Security Bulletin, a monthly publication of the Social Security Administration.

12. Figures on state Medicaid expenditures are taken from unpublished HCFA data, based on information provided annually by state Medicaid agencies. Total state expenditures are found in annual volumes of the Statistical Abstract.

CHAPTER 7

Findings and Implications

Introduction

In this chapter we summarize the findings and implications of our research. Before turning to this summary, it is useful to review the objectives of the research which are as follows:

- to describe the changes in Medicaid programs occurring as a result of federal and state legislation and regulation during the period 1978 through 1983;
- to describe the changes occurring in pediatrician participation in state Medicaid programs during the period 1978 through 1983;
- to examine changes in Medicaid participation and their associations with changes in Medicaid policy on a state by state basis, drawing policy relevant conclusions from these observations;
- to examine cross-sectional and longitudinal multivariate models of factors associated with pediatrician participation in state Medicaid programs, with particular attention to the role of state Medicaid policies in influencing participation.

We begin our summary by reviewing the policy changes implemented by the states under the federal legislation of the period 1978 through 1983. Next we present a summary of the findings of our cross-sectional and panel analyses. Finally, a few concluding remarks are presented.

Implementation of OBRA and TEFRA: A Review in Thirteen States

The period 1978 through 1983 saw the passage of important Medicaid legislation including OBRA and TEFRA. The legislation sought to restrict AFDC eligibility and to limit federal financial participation in Medicaid. In so doing, it put the states under great pressure to contain their costs under these programs, forcing many states to look for new ways to contain Medicaid expenditures.

In our thirteen state case studies we examine separately the responses of each of our study states to the pressures of the late 1970s and early 1980s. We find that each state made a unique response to the situation it faced during this time period. The states' political and economic realities led to

highly individualized adaptations to conditions prevailing during this period. However, some common themes emerge.

First, we find that most of our thirteen states avoided making deep or lasting cuts in Medicaid eligibility during the 1978 to 1983 period. All made the mandated OBRA cuts in AFDC eligibility but, even with the new flexibility in Medicaid coverage granted by OBRA, few initiated eligibility cuts beyond those mandated. Several states allowed income eligibility levels for existing categories of eligibles to be eroded by inflation. A strategy of neglecting eligibility levels during a period of inflation is a passive and effective method of reducing the number of program eligibles. It is, presumably, more politically viable than deleting whole categories of eligibles. (And, it is simple enough to expand the program later by merely raising eligibility levels when the economy permits.)

Very few states deleted categories of eligibles entirely and often those same categories were subsequently reinstated. For example, New York deleted and subsequently reinstated certain SSI-related Medicaid eligibles during this period. Similarly, Iowa temporarily suspended its AFDC-UP program and California avoided wholesale eligibilty cuts by transferring responsibility for its medically indigent adults from the state to the counties. However, one atypical example of a genuine eligibility cut was California's reduction of its medically needy protected income level in 1982.

Second, few states cut their covered services and, in fact, seven of the thirteen states added services. Often, the additions were services which, if substituted for existing services, would result in reduced Medicaid program costs. Coverage of hospital based home care and generic drugs are examples. It is, nonetheless, notable that states would initiate any program expansions during a time of such extreme fiscal pressure.

While few services were deleted, we note other changes in covered services that were taking place during this period. Overall, there was a much greater emphasis placed on utilization controls than had previously been the case. Many states imposed new limitations on the amount, scope and duration of covered services. And, many states required more extensive use of prior authorization than had previously been the case. Moreover, lock-in programs designed to curtail over-utilization proliferated; 10 of our 13 study states were using lock-in programs by the end of 1983. Finally, use of another form of utilization control--copayments--also increased during this time. Fiscal pressures, then, did not so much result in wholesale deletion of Medicaid services. Rather, we find that they brought about a variety of state initiatives to gain greater control over the use of Medicaid services and to ensure that such use was appropriate and efficient.

Third, we observe that many states expanded their use of reimbursement incentives to gain control of program costs. Prospective reimbursement for hospitals is the most dramatic example. Another example is expanded use of reimbursement incentives to encourage outpatient surgery. Case management programs designed to control primary care use were instituted in several states, and several began the widespread use of prepayment plans for Medicaid eligibles. Capitation payment systems became more common and some states began experimenting with risk-sharing arrangements aimed at improving primary care cost containment incentives.

Fourth, changes also occurred in the management of state Medicaid programs, particularly in efforts to reduce eligibility errors, to control fraud and abuse, and to recover payments from other third parties who might share the liability for a Medicaid eligible's medical costs. Several of our study states initiated vigorous efforts in these areas, hoping to achieve a higher level of program efficiency.

Occasionally, states did take some drastic measures in response to fiscal pressures. For example, several states instituted dramatic cuts in their reimbursement of Medicaid providers during this period. However, on the whole, the study states showed a preference for cutting and/or restructuring Medicaid reimbursement over cutting either program eligibility or benefits. We find, then, that while many individuals lost their AFDC and Medicaid eligibility as a result of OBRA, the states did not generally go any further than OBRA required in reducing eligibility or covered services. To this extent, at least, access to medical care was preserved during a period of severe fiscal pressure.

Our analysis suggests that states will, in the future, rely increasingly on cost containment through manipulating reimbursement incentives. This strategy has the potential to expand access through the more efficient deployment of state Medicaid resources. However, our state case studies emphasize that this strategy may have its unintended costs as well. We have seen that in many states recent reimbursement cuts have meant a decline in primary care providers' willingness to make their office-based services available to Medicaid-eligible children. To the extent that these children do continue to receive Medicaid services, it is often in unnecessarily expensive sites of medical care such as hospital emergency rooms and outpatient clinics.

The case studies suggest that the states need to find a balance between necessary alterations in primary care reimbursement incentives and discouragement of physician participation in the program. Schemes such as prepayment, capitation, risk sharing, and case management hold the promise of achieving sought after cost containment, but only if primary care providers can be convinced to participate in these innovations. The case studies suggest that simultaneous pursuit of both cost containment and maximum physician participation is not mutually exclusive. However, the states must be farsighted enough to anticipate that high collection costs and low capitation payments will discourage physicians, and bold enough to avert these problems. Several states appear to making headway in this regard, including Colorado, Pennsylvania, Maryland, and Tennessee.

In summary, our state case studies suggest that during the 1978 to 1983 period large-scale Medicaid eligibility and service reductions were avoided in favor of increased utilization control, short-term reimbursement reductions, and long-term reorganization of reimbursement incentives to favor Medicaid cost containment by providers. There is now more widespread use of prepayment and primary care case management, strategies which hold promise for cost containment and which are likely to be implemented by more state Medicaid programs in the future. While many of these programs are new, our case studies suggest that they can be structured in ways which foster pediatrician participation and, in so doing, avert the unnecessary costs of care rendered in emergency rooms and outpatient clinics.

Changes in Pediatrician Participation in Medicaid: A Review Of Descriptive Statistics in Thirteen States

When this research began, we expected--on the basis of the literature--that pediatrician participation in Medicaid might well have undergone significant declines in recent years. We expected that these declines might be linked to policy changes in Medicaid, particularly cutbacks resulting from OBRA and TEFRA. As previously noted, however, the cutbacks resulting from OBRA and TEFRA were less severe than had been anticipated. In addition, our descriptive statistics indicate that there were few highly significant changes in participation observed. Those that were observed were limited to particular states.

The 1978 and 1983 surveys indicate that the proportion of pediatricians participating in Medicaid changed only slightly, from 85 percent to 82 percent, a difference significant at the $p < .10$ level. Overall, then, fears that there had been substantial declines in Medicaid participation among pediatricians are not substantiated by our data. It is very important to note, of course, that changes in Medicaid participation have varied by state and that one state, Pennsylvania, experienced a decline in participation which was statistically significant. Moreover, there was a net decrease in participation in the panel, indicating a general downward trend in participation for this group. However, in general, we found that most pediatricians participated in Medicaid both in 1978 and in 1983.

Among physicians who participated in Medicaid, the average percent of patient load covered by Medicaid fell only slightly from 16 percent in 1978 to 15 percent in 1983. Although the states vary widely in the average extent of participation among pediatricians, in none of the states were there significant overall declines in this measure between 1978 and 1983. There was a significant decline in extent of participation between 1978 and 1983 for the panel, indicating a slight downward trend for this group over time. However, in general, the follow-up survey shows little change occuring in this measure of participation between 1978 and 1983.

Finally, we observed some increases in the proportion of physicians who, while accepting all new non-Medicaid patients, indicate that they are limiting their acceptance of Medicaid patients. The proportion who are limited participants increased from 26 percent in 1978 to 35 percent in 1983, a difference significant at the .01 level. Once again, interstate variation is notable and several states such as California, Georgia, Nebraska, and Oklahoma experienced significant increases in this measure of Medicaid participation between 1978 and 1983. There were no significant changes over time for this measure in the panel, either overall, or in individual states.

In summary, pediatrician participation in Medicaid has been relatively stable between 1978 and 1983. Although, as our case studies indicated, there were many changes in state Medicaid policies, these changes were apparently not significant enough to bring about major shifts in pediatricians' involvement with the program. Some downward trends are evident, particularly in the growing numbers of pediatricians limiting their Medicaid participation. However, with the exception of a few states with notable problems, participation remained largely unchanged. In the sections which follow, we will summarize our findings as to changes in the determinants of participation between 1978 and 1983.

Nonparticipation

Although relatively few in number, who are the nonparticipants? In general the 1983 cross-sectional analysis indicates that they are older, less likely to be board-certified, and less liberal in their attitudes about the role of government in ensuring the poor's access to health care. In addition, we found that nonparticipation was not particularly a function of either the socioeconomic level of the practice area, or the size of the Medicaid population in the practice area. This is important because it means that relatively few situational variables mitigate against the use of policy incentives to encourage participation. Finally, nonparticipants generally practice in areas that have more physicians. We expected such competitive conditions to bring about more Medicaid participation among pediatricians, but our analysis suggests that this is not the case. Indeed, it seems that more competitive conditions are associated with nonparticipation.

Although most pediatricians are participating in Medicaid, there is some reason to be concerned about observed declines between 1978 and 1983, especially in particular states. Unfortunately, some factors associated with nonparticipation are beyond the grasp of policymakers--such as the age and personal attitudes of the physicians. These factors cannot be directly altered by state policies. However, the analysis gives reason to be optimistic that state policymakers do have means at their disposal with which to encourage participation. In general, nonparticipants are found to be practicing in states with lower Medicaid reimbursement (relative to the physicians' fees), and in states with relatively less generous Medicaid policies, as measured by the Revised Medicaid Program Index. [1] The analysis suggests that raising reimbursement and expanding the generosity of state programs would foster a greater degree of participation among pediatricians.

From the panel analysis we see that pediatricians are continually changing their status in the Medicaid program. Overall, we observe a significant decline in participation in the panel between 1978 and 1983. Such changes in participation status, if they continued indefinitely, would result in 30 percent of the panel being nonparticipants. This is almost twice the amount of nonparticipation that was evident in the panel in 1978 when 86 percent of the pediatricians were found to be participants. We note, however, that the changes in participation status are not distributed evenly across the states; Pennsylvania, California, and Colorado each had rather large net decreases in participation during this period.

Since the number of nonparticipants in 1978 was small, little information could be gleaned from the multivariate panel analysis of this subgroup's changes in participation status by 1983. In contrast, the analysis of change by the many more pediatricians who <u>were</u> participating in 1978 proved more fruitful. We learned, for example, that pediatricians participating in 1978 but not in 1983 were those who moved into metropolitan communities during this time and those practicing in states in which the RMPI increased.

In summary, then, we find that most pediatricians continue to participate in Medicaid. Fortunately, relatively few situational variables are associated with being a Medicaid nonparticipant. This means that there are relatively few immutable determining factors. Indeed, we find evidence that nonparticipants might well be persuaded to participate in Medicaid by more generous state Medicaid policies. In addition, we find that one's

participation status was subject to change between 1978 and 1983, although the reasons for these changes are not easily explained by our multivariate model.

Extent of Participation

When we compare the 1978 and 1983 models of extent of participation we note first that the economic and professional incentives created by Medicaid policies continue to influence extent of participation. Positive economic incentives such as relatively higher reimbursement and lower collection costs are associated with greater participation, as are the positive professional incentives represented by relatively higher RMPI scores. We note, however, that while significant in both years, the magnitude of these coefficients has diminished. This suggests that these factors are somewhat less influential in 1983, relative to the other variables in the model, than was the case in 1978.

The effects of the service area characteristics, by comparison, are stronger in 1983 than in 1978. These factors, measuring demand and supply, are somewhat more influential than was previously the case. However the direction of the effects is not what the two market theory would predict. It does appear, as would be predicted, that physicians practicing in areas with relatively more Medicaid-eligibles are likely to have relatively more Medicaid patients. However, where the physician supply is the greatest (and, in particular, in metropolitan areas) pediatricians tend to have relatively fewer Medicaid patients. This counterintuitive finding has been consistent in the literature for several years, it held true in the 1978 study, and it is an even stronger finding in the 1983 replication.

The two market theory predicts that as physician supply increases, and competition therefore increases among physicians for privately paying patients, physicians will be able to attract fewer and fewer of the more "desirable" non-Medicaid patients into their practices. As a result, the theory predicts, physicians will, of necessity, dip further and further into the Medicaid market. We have consistently observed in the empirical literature, however, that this simply does not appear to be the case. Rather, we see that a relatively larger physician supply is associated with relatively fewer Medicaid patients.

What are the implications of the replication and the panel analysis? First, our analyses suggest that policymakers and Medicaid administrators can continue to foster greater participation in Medicaid through economic and professional incentives. Although the resulting increase in extent of participation may not be as great as it would have been in 1978, our analyses suggest that these remain viable tools for fostering greater participation among pediatricians.

Second, the replication suggests that policymakers and Medicaid administrators need to be aware of the perhaps unexpected consequences of the increasing physician supply and competition among health care providers, particularly in metropolitan areas. These factors apparently do not encourage greater participation in Medicaid among private office-based physicians. On the contrary, they appear to be associated with relatively less participation.

Neither the reasons for, nor the consequences of, this observed relationship are empirically verifiable with our data. That is, we cannot answer questions as to whether or how the pediatricians continue to draw an adequate patient load, even under conditions of growing competition. We also are unable to address where Medicaid children are getting their care, if not in the practices of private physicians. It is possible, for example, that these children are receiving care in the practices of primary care physicians not included in this study, such as family practitioners. However, it is also possible that these findings imply one of two other things: either further movement towards a two-class system of health care in our nation (in which the non-Medicaid market is served by private providers and the Medicaid market is served by public providers), or further movement toward a system of care characterized by unequal access (in which the non-Medicaid market is able to obtain care while the Medicaid market is not).

The panel analysis provides a few additional insights into the trends in the extent of Medicaid participation among pediatricians. These insights are unique because previous empirical studies examining this question have not used longitudinal data. We learn, for example, that 43 percent of the 412 panel members participating in both 1978 and 1983 decreased their Medicaid participation, on average from 19 to 11 percent. The largest decreases were observed in California and Oklahoma. In addition, the analysis alerts us to changes in several factors which, at least for the panel, were associated with changes in participation. We note, for example, that pediatricians least likely to have decreased their Medicaid participation between 1978 and 1983 were pediatricians whose practice costs increased least during this period. Declining economic conditions were also associated with being least likely to have decreased one's participation. And finally, pediatricians practicing in states where professional incentives improved, as measured by increases in the Medicaid program index, were also least likely to have decreased their participation in the program. The findings of the panel analysis emphasize that changes in participation between 1978 and 1983 were a function of changes in demand from the Medicaid-eligible population, as well as changing economic and professional incentives to participation.

It is our contention that the optimal extent of participation among physicians is most likely to come about in a policy environment which does not directly <u>discourage</u> participation. Extent of participation ought not be limited by conscious decisions in response to policy attributes such as low reimbursement and high collection costs which create discouraging negative economic and professional incentives. However, the analysis suggests that we must also be aware of other factors affecting participation, most notably issues of physician supply, physician distribution, and competition.

Full and Limited Medicaid Participation

Limited Medicaid participation became somewhat more widespread among pediatricians between 1978 and 1983, changing in varying amounts among the thirteen states in our sample. These trends are of particular concern because of their implications for the access of low income children to pediatric care. While Chapter 3 indicated that most pediatricians are continuing to participate in Medicaid over time, some are qualifying the nature of their participation. We observe that explicitly limiting one's Medicaid participation does, in general, result in seeing relatively fewer Medicaid

patients and, by implication, result in relatively less access for these children to pediatric care.

The replication of our 1978 model in 1983 suggests that becoming a limited Medicaid participant is, to a considerable extent, a function of the economic constraints and economic incentives facing the pediatrician. Foreign medical graduates, those with low practice overhead costs, and those in nonmetropolitan areas are all more likely to be full participants in 1983. And, in addition, those receiving a relatively higher Medicaid reimbursement relative to their usual fees are also more likely to be full participants in 1983.

Given the findings of the replication, what options might be available to Medicaid policymakers and administrators for increasing full participation among Medicaid participants? The most obvious answer following from this analysis is to maintain relatively generous reimbursement levels for pediatric care. Professional incentives, such as the physician autonomy implied by higher RMPI scores, seem relatively less important to limiting participation than they are, for example, in either becoming a participant (see Chapter 3), or the extent of one's participation (see Chapter 4). Thus, the Medicaid policy options for fostering full Medicaid participation are relatively few: adequate reimbursement is critical to fostering full participation.

The panel analysis provides some unique insights into changes in full and limited participation made by pediatricians between 1978 and 1983. We note that physicians who had been full participants in 1978 and became limited participants in 1983 were responding to specific changes occuring in their environment during that time period: they were most likely to have experienced increases in practice overhead costs (making Medicaid participation less financially viable), to have moved into a metropolitan area (where limited participation is more prevalent), or to have experienced a decrease in the level of their Medicaid reimbursement (also making Medicaid participation less financially viable). These findings reinforce those of the replication: becoming a limited participant between 1978 and 1983 was a response to economic constraints which might, to some extent, be mitigated by positive economic incentives created by Medicaid policies.

In contrast, changing from a limited participant in 1978 to a full participant in 1983 bore relatively little relationship to changes in the physicians' environment during this period. The change was most likely to occur among those who had lived in areas with relatively few Medicaid eligibles in 1978, and among those whose attitude about government's role in ensuring access to care had become more liberal (perhaps in reponse to the Reagan administration's policies during this time period). It is logical that we would see very little evidence that positive changes in Medicaid policies brought about changes from limited to full participation during this time period: as both Chapter 1 and Chapter 6 make evident, this was a time period in which very few changes were effected in Medicaid which physicians would view as positive. This is due primarily to the overriding concerns with recession, unemployment, and rising medical costs.

It is relatively easy to imagine a perfect world in which few pediatricians would impose explicit limitations on their Medicaid participation. Medicaid patients in need of pediatric care would have unrestricted choice among the providers in their community, and extent of

participation would be a function primarily of the size of the demand from the Medicaid eligible population. Our analysis suggests two factors which currently mitigate against this ideal. First, negative economic incentives such as low fees and high practice overhead costs discourage physicians from full program participation. Second, competition from other providers, particularly in metropolitan areas, also discourages full program participation. Our analysis suggests that the former set of factors, at least, is amenable to change through public policies which would create more favorable economic conditions surrounding full participation. By, in effect, reducing the costs to physicians associated with participation (by raising fees and minimizing payment delays, for example), program administrators can foster more full participation.

Other Findings and Implications

It is important that Medicaid policymakers and administrators continue to monitor changes in physician participation. Medicaid is a dynamic policy environment and, as we have demonstrated, policy changes can have important implications for both access and program costs. Future developments at the federal and state levels will, inevitably, have an impact on the physicians participating in the program. However, the only way to be sure about the direction of these effects is to continue to measure them.

Apparently, recent Medicaid policy changes have not brought about dramatic declines in participation, although a few states are experiencing participation problems and the rise in limited participation is an unwelcome trend. However, despite the relative stability in participation, future policies which alter physicians' Medicaid reimbursement incentives may more directly affect physicians than have Medicaid policy changes of the recent past. For this reason it becomes particularly important to continue to monitor participation trends. And it is also important for state Medicaid policymakers and administrators to avoid unduly adverse economic conditions surrounding physicians' participation in Medicaid.

Further research will be needed to untangle the complicated relationships between supply and Medicaid participation. Is it that physicians somehow avoid reaching into the non-Medicaid market even as competition increases? or is it, perhaps, that while competition has intensified, it has not yet done so to the point where the relationships implied by the two-market theory would become evident? or is it that Medicaid participation appears to be declining only because the overall size of the physicians' non-Medicaid practice is increasing? The latter possibility is unlikely given the growing numbers pf physicians and the declining numbers of children. However, if pediatricians have been successful in expanding into new practice areas such as behavioral pediatrics and the care of adolescents and young adults, then this outcome would be possible. Future research could untangle these relationships.

Finally, the research reported here makes it evident that a fruitful strategy for the investigation of federal-state programs such as Medicaid is one which involves multiple levels of analysis. In this study, we explicitly employ two units of analysis: that of the individual physician and that of the state. In so doing, we recognize the value of explanation occuring at both of these levels. Using the individual as the unit of analysis, one is able to provide a rigorous test of multivariate models of physician behavior

(as in Chapters 3, 4 and 5). However, such analyses are of limited usefulness in developing state-specific policy recommendations for fostering Medicaid participation in particular states. Since Medicaid is a state program, it is also necessary to include empirical work with the state as the unit of analysis (as in Chapter 6). This strategy recognizes that the tremendous interstate variation in Medicaid limits our ability to generalize from multivariate analyses of physicians (in multiple states) to physicians in any particular state. We believe that, because of its federal-state structure, the study of Medicaid program outcomes requires a multi-level approach such as the one taken here.

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APPENDIX A

Survey Instruments

CONFIDENTIAL
NORC - 4286

BEGIN DECK 01

OFFICE USE ONLY:

BATCH # [ ][ ] 07-08/

LOG # [ ][ ][ ][ ] 09-12/

SURVEY OF PEDIATRICIANS' PARTICIPATION IN MEDICAID

PERSONAL INTERVIEW

BEFORE STARTING INTERVIEW

ENTER PHYSICIAN ID NUMBER IN BOX TO RIGHT.

PHYSICIAN ID # [ ][ ][ ][ ]
01-04/

TIME BEGAN _____ AM PM
13-14/ 15/

Doctor, this survey consists of three interrelated tasks.

First, I'd like to ask you some simple questions about your understanding of Medicaid, your attitudes, and experience with it, and a few questions about your own practice.

Then I want to leave with you some forms, called Patient Record Forms, for you to record certain information about a sample of the patients who come to your office next week. I'll explain these forms to you. They are very simple and each one should take only a minute or so to fill out.

And then, finally, in about six months, we will write or telephone your office for information on the fees you charged for those patient services, the amount paid, and the source of payment.

All of this information is being gathered from a representative sample of pediatricians in some thirteen states. The aggregated results will be reported publicly, but all individual responses will of course be completely confidential, and the data will be of great value to the American Academy of Pediatrics.

I'd like to begin with a few questions about the way Medicaid works in your state.

1. As far as you know, is any state money used to pay for Medicaid services in your state, or is the Medicaid program funded entirely by the federal government?

State money used	1	16/
Entirely federal government	2	
Don't know	8	

2. In your state, is the amount of services paid for by Medicaid limited in any way--that is, are there limits on the number of visits covered, the number of hospital days covered, or any other limits?

Yes, there are limits .....(ASK A).....	1	17/
No, no limits	2	
Don't know	8	

A. IF YES: Are these limits set by the federal government or by the state?

Federal	1	18/
State	2	
Both	3	
Don't know	8	

---

3. As you understand the Medicaid program in your state, will Medicaid pay for services to patients not receiving welfare payment, or do they cover only welfare patients?

Pay for non-welfare	1	19/
Only welfare	2	
Don't know	8	

---

4. Is the Medicaid program in your state administered by the state public health department, or by the state welfare department, or by another agency?

Public health	1	20/
Welfare	2	
Other agency	3	
Don't know	8	

---

5. As you may know, the Early and Periodic Screening, Diagnosis, and Treatment program, that is, EPSDT, is included in all state Medicaid programs. As far as you know, in order to be paid for by Medicaid in your state, must the EPSDT screening examination be provided by the public health department only, by a private physician only, or can it be provided by either?

Public health department only	1	21/
Private physician only	2	
Either, doesn't matter	3	
Don't know	8	

Now I'd like to ask about your opinions.

6. Some people believe it is the responsibility of society, through its government, to insure that medical care is available to those who cannot afford it. Do you agree with that strongly, agree somewhat, disagree somewhat, or disagree strongly?

Agree strongly	1	22/
Agree somewhat	2	
Disagree somewhat	3	
Disagree strongly	4	
Don't know, don't care	8	

7. In general, how well would you say Medicaid works in this state. Would you say it's doing an excellent job, good job, a fair job, or a poor job?

Excellent	1	23/
Good job	2	
Fair job	3	
Poor job	4	
Don't know	8	

8. How much influence do you think doctors as a professional group can have on the rules and regulations of your state's Medicaid program? Would you say a great deal of influence, a moderate amount, hardly any, or none at all?

A great deal	1	24/
A moderate amount	2	
Hardly any	3	
None at all	4	
Don't know	8	

9. Suppose you had a problem about a Medicaid program regulation and took your question to a Medicaid official. Would you expect the official to pay a lot of attention to what you had to say, only some attention, very little attention, or none at all?

A lot of attention	1	25/
Only some attention	2	
Very little attention	3	
None at all	4	
Don't know	8	

10. Have you ever participated in your state's Medicaid program--that is, have you ever received payment from Medicaid in this state?

Yes .....(GO TO Q. 11).....	1	26/
No .....(SKIP TO Q. 12)....	2	

IF YES TO Q. 10, ASK:

11. Do you now accept all Medicaid patients who contact you, only some, or none?

All .....(SKIP TO Q. 13)..	1	27/
Only some .....(ASK A).....	2	
None .....(GO TO Q. 12)...	3	

IF ONLY SOME;

A. Which of the arrangements listed on this card best describes your current participation in Medicaid?

HAND CARD A

Accept Medicaid patients for acute but not for preventive care ...	1	28/
Accept Medicaid patients up to a percentage of patient load .....(ASK 1)....	2	
Accept Medicaid patients on a case-by-case basis	3	

(1) IF ACCEPT UP TO PERCENTAGE OF PATIENT LOAD: What percentage?

[ ][ ] (PERCENT) 29-30/

12. I'd like to ask about several reasons why a doctor might decide (against participation/to limit participation) in Medicaid. As I read each, please tell me if it is a very important reason, a somewhat important reason, or not at all important in your own decision.

	Very important	Somewhat important	Not at all important	
A. Not all health care services are covered by Medicaid	1	2	3	31/
B. It takes too long to complete the necessary paperwork	1	2	3	32/
C. It takes too long to receive payment from Medicaid	1	2	3	33/
D. Medicaid program regulations are too complex	1	2	3	34/
E. Medicaid payments are too low	1	2	3	35/
F. Medicaid payments are unpredictable	1	2	3	36/
G. Medicaid program regulations interfere with providing high-quality medical care	1	2	3	37/
H. Problems such as broken appointments and language barriers make it difficult to treat Medicaid patients	1	2	3	38/
I. I usually don't treat the type of patient who is eligible for Medicaid	1	2	3	39/
J. There are few Medicaid eligibles in this area	1	2	3	40/
K. I am opposed to government involvement in health care	1	2	3	41/
L. I don't have time to see more patients	1	2	3	42/

IF DOCTOR HAS NEVER PARTICIPATED IN MEDICAID ("NO" IN Q. 10), SKIP TO Q. 17.

OTHERWISE, SKIP TO Q. 14.

ASK Q. 13 ONLY IF DOCTOR ACCEPTS ALL MEDICAID PATIENTS IN Q. 11:

13. I'd like to talk about several problems that doctors sometimes encounter when dealing with the Medicaid program. As I read each problem, please tell me if it causes you a great deal of trouble, only some trouble, or no trouble at all.

	A great deal of trouble	Only some trouble	No trouble at all	
A. Not all health care services are covered by Medicaid	1	2	3	43/
B. It takes too long to complete the necessary paperwork	1	2	3	44/
C. It takes too long to receive payment from Medicaid	1	2	3	45/
D. Medicaid program regulations are too complex	1	2	3	46/
E. Medicaid payments are too low	1	2	3	47/
F. Medicaid payments are unpredictable	1	2	3	48/
G. Medicaid program regulations interfere with providing high-quality medical care	1	2	3	49/
H. Problems such as broken appointments and language barriers make it difficult to treat Medicaid patients	1	2	3	50/

IF DOCTOR HAS EVER PARTICIPATED IN MEDICAID ("YES" TO Q. 10), ASK QS. 14-16:

14. We have been talking about problems that a doctor might encounter providing medical care to Medicaid patients. Have you ever personally contacted a professional organization, such as a local pediatrics society or medical society, about any of these problems?

Yes .....(ASK A)..... 1 51/

No 2

A. IF YES: How satisfied were you with the results of that contact--would you say completely satisfied, very satisfied, moderately satisfied, slightly satisfied, or not satisfied at all?

Completely satisfied 1 52/

Very satisfied 2

Moderately satisfied 3

Slightly satisfied 4

Not satisfied at all 5

15. Have you ever contacted an elected public official about any of these problems with Medicaid?

Yes .....(ASK A)..... 1 53/

No 2

A. IF YES: How satisfied were you with the results of that contact--would you say completely satisfied, very satisfied, moderately satisfied, slightly satisfied, or not satisfied at all?

Completely satisfied 1 54/

Very satisfied 2

Moderately satisfied 3

Slightly satisfied 4

Not satisfied at all 5

---

16. Have you ever contacted Medicaid program administrators--either in your local area or at the state or national level--about any of these problems?

Yes .....(ASK A)..... 1 55/

No 2

A. IF YES: How satisfied were you with the results of that contact--completely satisfied, very satisfied, moderately satisfied, slightly satisfied, or not satisfied at all?

Completely satisfied 1 56/

Very satisfied 2

Moderately satisfied 3

Slightly satisfied 4

Not satisfied at all 5

ASK EVERYONE:

17. During a typical work week, about how many hours altogether would you say you yourself spend at administrative activities connected with your practice? Include such activities as filling out health insurance forms, billing patients, and dealing with personnel or financial matters of the practice.

Hours spent on administrative activities: [ ][ ] 57-58/

---

18. About how many hours would you say you spend at medical or professional activities in a typical week? Include hours spent in the office, time spent on house calls including travel, time spent on hospital rounds, hours spent in a clinic or other medical facility, consulting with other physicians, and time devoted to other professional activities.

Hours spent on medical/professional activities: [ ][ ][ ] 59-61/

. SUM RESPONSES TO Q. 17 AND Q. 18 AND ASK:

So that makes a total of _____ hours in an average week. Does that sound about right?
(SUM)

TOTAL HOURS: [ ][ ][ ] 62-64/

CORRECT Qs. 17 AND 18 IF NECESSARY.

BEGIN DECK 0

20. A. Approximately what percentage of your patients are of Hispanic origin, such as Chicano, Puerto Rican, or Cuban?

[ ][ ][ ] (PERCENT) 07-09

B. About what percent of your patients are Black?

[ ][ ][ ] (PERCENT) 10-12

---

21. About what percentage of your patients . . .

	PERCENT	
A. are covered by Blue Shield usual, customary, or reasonable (UCR) policies?	[ ][ ][ ]	13-15
B. are covered by Medicaid?	[ ][ ][ ]	16-18
C. are covered by Part B of Medicare?	[ ][ ][ ]	19-21
D. are covered by commercial insurance companies (Aetna, Travelers, etc.)?	[ ][ ][ ]	22-24
E. have no coverage by third party payers?	[ ][ ][ ]	25-27

---

22. Aside from patients whose care is paid for by Medicaid, are you currently accepting all new patients who contact you, only some, or no new patients?

All new patients 1 28
Only some 2
None 3

---

23. How frequently do you treat patients who may be unable to pay their bills for your services, but are not covered either by a public or private health plan--always, sometimes, or never?

Always .....(ASK A).... 1 2
Sometimes.....(ASK A).... 2
Never 3

IF EVER TREAT:

A. When you treat these patients, do you reduce or waive the fee to the patient--always, sometimes, or never?

Always 1 3
Sometimes 2
Never 3

---

24. How many years have you practiced in this (city/county)?

Number of years: [ ][ ] 31-3

Here [illegible] list of several professional organizations. HAND CARD B.

A. [illegible] member of any [illegible] organizations?	Yes	No		FOR EACH 'YES' IN A, ASK: B. How often do you attend meetings--regularly, occasionally, or hardly ever? Regularly	Occasionally	Hardly ever	
American Medical Association	1	2	33/	1	2	3	34/
American Academy of Pediatrics	1	2	35/	1	2	3	36/
Ambulatory Pediatric Association	1	2	37/	1	2	3	38/
American Pediatric Society	1	2	39/	1	2	3	40/
State Medical Society	1	2	41/	1	2	3	42/
Local (county or city) medical society	1	2	43/	1	2	3	44/

26. Were you born in the United States?

Yes 1 45/
No 2

27. Do you have a solo practice, or are you associated with other physicians in a partnership, in a group practice, or in some other way?

Solo .....(ASK A)..... 1 46/
Partnership .....(GO TO Q. 28)..... 2
Group practice .....(GO TO Q. 28)..... 3
Other (SPECIFY AND GO TO Q. 28)

_____ 4

IF SOLO PRACTICE:

A. Do you share any expenses with other physicians?

Yes .....(ASK B)..... 1 47/
No .....(SKIP TO Q. 33).... 2

B. IF YES: With how many physicians do you share the costs of non-physician personnel?

48-49/

Number of physicians: [ ][ ] THEN SKIP TO Q. 33

BEGIN DECK 03

IF PARTNERSHIP, GROUP, OR OTHER, ASK QS. 28-32:

28. How many other physicians are associated with you?

Number of physicians: [ ][ ] 07-08/

29. What are the main specialties of the other physicians associated with you? FOR EACH SPECIALTY MENTIONED, ASK A AND B.

CIRCLE "1" IF MENTIONED:			A. How many of these physicians work at least 20 hours a week for this practice? NUMBER OF PHYSICIANS		B. How many of these physicians work less than 20 hours a week for this practice? NUMBER OF PHYSICIANS	
1. Anesthesiology . .	1	09/	. . . [ ][ ]	10-11/	[ ][ ]	12-13/
2. Family practice . .	1	14/	. . . [ ][ ]	15-16/	[ ][ ]	17-18/
3. General practice .	1	19/	. . . [ ][ ]	20-21/	[ ][ ]	22-23/
4. General surgery . .	1	24/	. . . [ ][ ]	25-26/	[ ][ ]	27-28/
5. Internal Medicine .	1	29/	. . . [ ][ ]	30-31/	[ ][ ]	32-33/
6. Obstetrics/ Gynecology . . .	1	34/	. . . [ ][ ]	35-36/	[ ][ ]	37-38/
7. Orthopedic surgery	1	39/	. . . [ ][ ]	40-41/	[ ][ ]	42-43/
8. Pediatrics	1	44/	. . . [ ][ ]	45-46/	[ ][ ]	47-48/
9. Radiology	1	49/	. . . [ ][ ]	50-51/	[ ][ ]	52-53/
10. Other (SPECIFY) _____	1	54/	. . . [ ][ ]	55-56/	[ ][ ]	57-58/

30. Who usually makes the final decision about setting fees for medical services?

Each physician sets own fees 1 59/

Collective decision by physicians associated with practice 2

Board of directors 3

Other (SPECIFY) _____

BEGIN DECK 04

31. Who usually makes the final decision about whether to accept Medicaid patients?

Each physician	1	07/
Collective decision by physicians associated with practice	2	
Board of directors	3	
Other (SPECIFY) _____	4	

---

32. Who usually makes the final decision about how many Medicaid patients to accept?

Each physician	1	08/
Collective decision by physicians associated with practice	2	
Board of directors	3	
Other (SPECIFY) _____	4	

ASK EVERYONE:

33. What was the total gross revenue, that is, revenue before your expenditures on personnel, equipment, rent and other operating expenses, of this practice in 1978?

Gross Revenue: $ [ ][ ][ ][ ][ ][ ][ ] 09-15/

Refused .. (ASK A) 7

IF REFUSAL ON THIS ITEM, ASK A:

A. Can you tell me if your total gross revenue for this practice in 1978 was more or less than (IF SOLO PRACTICE: $70,000/IF PARTNERSHIP OR GROUP: $300,000)?

More	1	16/
Less	2	
Refused	7	

---

34. In 1978, how many non-physician employees were there in your practice?

Total Non-physician Employees: [ ][ ] 17-18/

(IF '00", GO TO Q. 39)

---

35. In 1978, what were the total yearly wages for these non-physician employees?

Non-physician Employee Wages: $ [ ][ ][ ][ ][ ][ ][ ] 19-25/

36.	A. Of the non-physician employees in your practice in 1978, how many were . . . NUMBER IN PRACTICE	B. Altogether, how many hours did (that person/those people) work per week? TOTAL HOURS PER WEEK	C. Altogether, what was the total weekly salary for (that person/ those people)? TOTAL WEEKLY SALARY
1.	secretaries, bookkeepers, receptionists, or office managers? 26-27/ ☐☐ None (GO TO 2)...00	28-31/ ☐☐☐☐	32-36/ $ ☐☐☐☐☐
2.	registered nurses? 37-38/ ☐☐ None (GO TO 3)...00	39-42/ ☐☐☐☐	43-47/ $ ☐☐☐☐☐
3.	licensed practical nurses? 48-49 ☐☐ None (GO TO 4)...00	50-53/ ☐☐☐☐	54-58/ $ ☐☐☐☐☐
4.	medical, X-ray, or laboratory technicians or aides? 59-60/ ☐☐ None (GO TO 5)...00	61-64/ ☐☐☐☐	65-69/ $ ☐☐☐☐☐
5.	highly trained physician extenders such as physician assistants, nurse practitioners? 07-08/ ☐☐ None 00	09-12/ ☐☐☐☐	BEGIN DECK 0 13-17/ $ ☐☐☐☐☐

37. Doctor, the last questions I have concern your experience with other third party payers such as Blue Shield or other private insurance plans. They can be answered either by you or by someone on your staff who handles health insurance forms for the practice--which would you prefer?

Doctor answers .....(GO TO A).... 1 18/

Someone else answers .....(GO TO 38).... 2

A. IF DOCTOR PREFERS TO ANSWER QUESTIONS, CONTINUE WITH QS. 39-62. THEN EXPLAIN THE USE OF THE PATIENT RECORD FORMS.

---

38. IF DOCTOR PREFERS TO HAVE THE PAYMENT SOURCE QUESTIONS ADMINISTERED TO SOMEONE ELSE IN THE OFFICE, ASK FOR THAT PERSON'S NAME AND POSITION:

_____ (NAME) _____ (POSITION)

THEN SKIP TO QUESTION 63.

These questions relate to what (you are/Dr. is) usually paid for specific procedures.

IF DOCTOR HAS NO PATIENTS IN A PARTICULAR PLAN OR TYPE OF COVERAGE, CIRCLE "1" FOR THAT COVERAGE AND GO TO THE NEXT QUESTION.

IF PLAN DOES NOT COVER SERVICE, CIRCLE "2" FOR THAT SERVICE AND ASK ABOUT NEXT SERVICE.

	39. What is (your/Dr's) current usual fee for:	40. Suppose a patient is covered by Blue Shield. How much do you expect to receive in payment for: CIRCLE 1 IF PT. COVERED..1 NO PATIENTS COVERED.....2 34/	41. Suppose a patient is covered by a major private insurance company. How much do you expect to receive in payment for: CIRCLE 1 IF PT. COVERED..1 NO PATIENTS COVERED.....2 50/	42. Suppose a patient is covered by Medicaid. How much do you expect to receive in payment for: CIRCLE 1 IF PT. COVERED..1 NO PATIENTS COVERED.....2 66/
A. a physical examination of a well new-born in the hospital	19-21/ $	35-37/ $	51-53/ $	67-69/ $
PLAN DOESN'T COVER SERVICE.....	.....	 996	 996	 996
B. a well child office visit	22-24/ $	38-40/ $	54-56/ $	70-72/ $
PLAN DOESN'T COVER SERVICE.....	.....	 996	 996	 996
C. a routine medical follow-up visit in your office	25-27/ $	41-43/ $	57-59/ $	BEGIN DECK 06 07-09/ $
PLAN DOESN'T COVER SERVICE.....	.....	 996	 996	 996
D. a follow-up medical visit in hospital on day after patient admitted	28-30/ $	44-46/ $	60-62/ $	10-12/ $
PLAN DOESN'T COVER SERVICE.....	.....	 996	 996	 996
E. a throat culture	31-33/ $	47-49/ $	63-65/ $	13-15/ $
PLAN DOESN'T COVER SERVICE.....	.....	 996	 996	 996

INTERVIEWER: IF DOCTOR HAS NO PATIENTS IN BLUE SHIELD (NO PATIENTS COVERED IN Q. 40), SKIP TO INSTRUCTION ON TOP OF PAGE 16.

43. About what percent of the time is a Blue Shield claim returned to your office for additional work?

[ ][ ][ ] (PERCENT) 19-21/

---

44. About how many weeks does it take Blue Shield to make payment?

Number of weeks: [ ][ ] 22-23/

---

45. About how many minutes does it take to fill out a claim for Blue Shield?

Number of minutes: [ ][ ] 24-25/

---

46. How willing is Blue Shield to work with you when there is a problem or question concerning an individual claim?

26/

Very willing 1
Somewhat willing 2
Somewhat unwilling 3
Very unwilling 4
Not applicable, R. has never contacted plan about problem 5

---

47. How frequently would you say the procedures for filing Blue Shield claims are changed?

27/

Very frequently 1
Frequently 2
Infrequently 3
Very infrequently 4

---

48. How predictable is Blue Shield in the amount they pay for (your/doctor's) services?

28/

Very predictable 1
Somewhat predictable 2
Somewhat unpredictable 3
Very unpredictable 4

INTERVIEWER: IF DOCTOR HAS NO PATIENTS COVERED BY OTHER PRIVATE INSURANCE (NO PATIENTS COVERED IN Q. 41), SKIP TO INSTRUCTIONS ON TOP OF PAGE 17.

49. About what percent of the time is a private insurance claim returned to your office for additional work?

[ ][ ][ ] (PERCENT) 29-31/

---

50. About how many weeks does it take a private insurance company to make payment?

Number of weeks: [ ][ ] 32-33/

---

51. About how many minutes does it take to fill out a claim for a private insurance company?

Number of minutes: [ ][ ] 34-35/

---

52. How willing are private insurance companies to work with you when there is a problem or question concerning an individual claim? 36/

Very willing 1
Somewhat willing 2
Somewhat unwilling 3
Very unwilling 4
Not applicable, R. has never contacted plan about problem 5

---

53. How frequently would you say the procedures for filing private insurance claims are changed? 37/

Very frequently 1
Frequently 2
Infrequently 3
Very infrequently 4

---

54. How predictable are private insurance companies in the amount they pay for (your/doctor's) services? 38/

Very predictable 1
Somewhat predictable 2
Somewhat unpredictable 3
Very unpredictable 4

INTERVIEWER: IF DOCTOR HAS NO PATIENTS IN MEDICAID (NO PATIENTS COVERED IN Q. 42). SKIP TO Q. 61.

55. About what percent of the time is a Medicaid claim returned to your office for additional work?

[ ][ ][ ] (PERCENT) 39-41/

---

56. About how many weeks does it take Medicaid to make payment?

Number of weeks: [ ][ ] 42-43/

---

57. About how many minutes does it take you to fill out a claim for Medicaid?

Number of minutes: [ ][ ] 44-45/

---

58. How willing is Medicaid to work with you when there is a problem or question concerning an individual claim? 46/

Very willing 1
Somewhat willing 2
Somewhat unwilling 3
Very unwilling 4
Not applicable, R. has never contacted plan about problem 5

---

59. How frequently would you say the procedures for filing Medicaid claims are changed? 47/

Very frequently 1
Frequently 2
Infrequently 3
Very infrequently 4

---

60. How predictable is Medicaid in the amount they pay for (your/doctor's) services? 48/

Very predictable 1
Somewhat predictable 2
Somewhat unpredictable 3
Very unpredictable 4

61. About how many weeks does it take patients who pay you directly to make payments for services?

Number of weeks: [ ][ ] 49-50/

---

62. About how many minutes does it take to prepare an invoice for direct billing of patients?

Number of minutes: [ ][ ] 51-52/

FOR EVERY DOCTOR:

63. Thank you, doctor. Now, before I show you the Patient Record Form we would like you to fill out, I would like to ask you about ambulatory patients you will be seeing in your office next week, that is, from ____/____ through ____/____.

month (Monday)	date (Monday)	month (Sunday)	date (Sunday)
53-54/	55-56/	57-58/	59-60/

Are you likely to see any ambulatory patients in your office during that week?

Yes ..... (GO TO Q. 64) 1

No ..... (ASK A) 2

A. IF NO: When is the first week after that, that you will be seeing any ambulatory patients in your office?

_____ month	_____ date	THROUGH	_____ month	_____ date
61-62/	63-64/		65-66/	67-68/

ENTER DATES OF WEEK, STARTING WITH MONDAY, THROUGH SUNDAY.

I see. That would be (DATE) through (DATE).

A. At what office location will you be seeing ambulatory patients during that 7-day period? RECORD UNDER A AND THEN CODE B.

B. FOR EACH OFFICE LOCATION ENTERED IN A, CODE YES OR NO TO "IN SCOPE."

IN SCOPE (Yes)	OUT OF SCOPE (No)
Private offices	Hospital emergency rooms
Free-standing clinics (non-hospital based)	Hospital outpatient departments
Groups, partnerships	College or university infirmaries
Kaiser, HIP, Mayo Clinic	Industrial outpatient facilities
Neighborhood Health Centers	Family planning clinics
Privately operated clinics (except for family planning)	Government-operated clinics (VD, maternal & child health, etc.)

IN CASE OF DOUBT, ASK: Is that (clinic/facility/institution) hospital based?

Is that (clinic/facility/institution) government operated?

C. Is that all of the office locations at which you expect to see ambulatory patients during that week?

Yes X

No ..... Y

IF NO: OBTAIN ADDITIONAL OFFICE LOCATION(S), ENTER IN "A" BELOW, AND REPEAT.

	A. Office Location	B. In Scope? Yes	No
(1)	_____	X	Y
(2)	_____	X	Y
(3)	_____	X	Y
(4)	_____	X	Y

IF ALL LOCATIONS ARE OUT OF SCOPE, DISCONTINUE INTERVIEW.

65. A. During that week (REPEAT DATES), how many ambulatory patients do you expect to see in your office practice? (DO NOT COUNT PATIENTS SEEN AT OUT-OF-SCOPE LOCATIONS CODED IN 64 B.)

ENTER TOTAL UNDER "A" BELOW AND CIRCLE ON APPROPRIATE LINE.

B. And during those seven days (REPEAT DATES IF NECESSARY), on how many days do you expect to see any ambulatory patients? COUNT EACH DAY IN WHICH DOCTOR EXPECTS TO SEE ANY PATIENTS AT AN IN-SCOPE OFFICE LOCATION.

ENTER TOTAL UNDER "B" BELOW AND CIRCLE NUMBER IN APPROPRIATE COLUMN.

DETERMINE PROPER PATIENT LOG FORM FROM CHART BELOW. READ ACROSS ON "TOTAL PATIENTS" LINE UNDER "A" AND CIRCLE LETTER IN APPROPRIATE "DAYS" COLUMN UNDER "B."

THIS LETTER TELLS YOU WHICH OF THE FOUR PATIENT LOG FORMS (A, B, C, D) SHOULD BE USED BY THIS DOCTOR.

LOG FORM DESCRIPTION	A. Expected total patients during survey week.	B. Total days in practice during week.						
	ENTER TOTAL FROM Q. 65 A. 07-09/	ENTER TOTAL FROM Q. 65 B. _____ 10/ DAYS						
		1	2	3	4	5	6	7
A - Patient Record is to be completed for ALL patients listed on Log.	1 - 12 PATIENTS	A	A	A	A	A	A	A
	13 - 25 "	B	A	A	A	A	A	A
B - Patient Record is to be completed for every SECOND patient listed on Log.	26 - 39 "	C	B	A	A	A	A	A
	40 - 52 "	C	B	B	A	A	A	A
	53 - 65 "	D	C	B	B	A	A	A
	66 - 79 "	D	C	B	B	B	A	A
	80 - 92 "	D	D	C	B	B	B	B
C - Patient Record is to be completed for every THIRD patient listed on Log.	93 - 105 "	D	D	C	B	B	B	B
	106 - 118 "	D	D	C	C	B	B	B
	119 - 131 "	D	D	C	C	B	B	B
	132 - 145 "	D	D	D	C	C	B	B
	146 - 158 "	D	D	D	C	C	B	B
*D - Patient Record is to be completed for every FIFTH patient listed on Log.	159 - 171 "	D	D	D	C	C	C	C
	172 - 184 "	D	D	D	C	C	C	C
	185 + "	D	D	D	D	D	D	D

*In the rare instance the physician will see more than 500 patients during his assigned reporting week. give him two D Patient Log Folios and instruct him to complete a patient record form for only every tenth patient. Then you are to draw an X through the Patient Record on every other page of the two folio pads, starting with page 1 of the pad. The physician then completes the Patient Log on every page, but completes the Patient Record on every second page.

66. FIND LOG FOLIO WITH APPROPRIATE LETTER AND CIRCLE LETTER, ENTER FIRST FOUR NUMBERS OF FORM AND NUMBER OF LINES STAMPED "BEGIN ON NEXT LINE" FOR THE B-C-D LOG FORMS (if no lines are stamped, enter "0") BELOW.

FOLIO 11/ Letter	FOLIO 12-15/ Number				No. of lines Stamped "BEGIN ON NEXT LINE"	FOR OFFICE USE ONLY Number of patient record forms completed	16-18/
A							
B							
C							
D							

67. Here is a Folio that contains a pad of the Patient Record Forms we would like you to fill out during that week.

Your secretary should record the name of each presenting patient during the week, writing in each person's name on the Patient Log. (As you see, you are to fill out a Record Form for every (second, third, fifth) patient.)

Your secretary can fill out Items 1 through 4, and she should then give the form to you to fill out Items 5 through 16. This only takes a minute of your time, and can be done either right after the patient/s visit or at any other convenient time of the day.

Instructions for the various items are printed on the inside cover and back of the folio, but let me just run through them briefly to see if you have any questions.

EXPLAIN EACH ITEM BRIEFLY.

EMPHASIZE THAT EVERY PATIENT VISIT IS TO BE RECORDED ON THE LOG, EVEN IF PATIENT DID NOT SEE DOCTOR HIMSELF.

At the end of the week, simply detach the Patient Record Forms and send them to me in this envelope (HAND ENVELOPE).

We want you to keep the Patient Log in this office, in order to preserve the confidentiality of the patient's name. I will edit the Patient Record Forms before I send them in to our office, and if I have any questions, I will call your secretary.

After I have finished editing the forms, I will ask her to mail the Patient Log, with the patient's names, to the American Academy of Pediatrics in Evanston, Illinois, and I will leave her this envelope. (SHOW AAP ENVELOPE.)

Then, in about six months, they will mail the Log back to you, and we will send you some simple questions about charges and payments for these visits.

This whole survey will be tremendously helpful to the Academy, and we certainly appreciate your cooperation.

Do you have any questions? RECORD VERBATIM BELOW ANY CONCERN, PROBLEMS, OR QUESTIONS THE DOCTOR RAISES.

---

68. IF DOCTOR EXPECTS TO SEE AMBULATORY PATIENTS AT MORE THAN ONE IN-SCOPE LOCATION DURING THE ASSIGNED WEEK, TELL HIM YOU WILL DELIVER THE FORMS TO THE OTHER LOCATION(S). ENTER THE FORM LETTER AND NUMBER(S) AND NUMBER OF LINES STAMPED "BEGIN ON NEXT LINE" FOR THE B-C-D LOG FOR THOSE LOCATIONS BELOW, BEFORE DELIVERING FORM(S).

Location	FOLIO					No. of lines Stamped "BEGIN ON NEXT LINE"	FOR OFFICE USE ONLY Number of patient record forms completed	
	Letter	Number						
								19-26/
								27-34/
								35-42/

---

69. BEFORE YOU LEAVE, AGAIN STRESS THAT EACH AND EVERY AMBULATORY PATIENT SEEN BY THE DOCTOR OR HIS STAFF DURING THE 7-DAY PERIOD AT ALL IN-SCOPE OFFICE LOCATIONS (REPEAT THEM) IS TO BE INCLUDED IN THE SURVEY, THAT EACH PATIENT IS TO BE RECORDED ON THE LOG, AND ONLY THE APPROPRIATE NUMBER OF PATIENT RECORDS COMPLETED.

Thank you for your time, Dr. _____. If you have any (more) questions, please feel free to call me. My phone number is written in the folio. I'll call you on Monday morning of your survey week just to remind you.

PLEASE COMPLETE ITEMS ON NEXT PAGE IMMEDIATELY AFTER LEAVING RESPONDENT.

A. Name of state, county, and zip code of doctor's practice: [ ][ ] 43-44/

_____ [ ][ ][ ] 45-47/

[ ][ ][ ][ ][ ] 48-52/

B. Size of community in which doctor's practice is located:

DESCRIPTION

Within an SMSA and . . .

a large central city (over 250,000) 01 53-54/
a medium size central city (50,000 to 250,000) 02
a suburb of a large central city 03
a suburb of a medium size central city 04
an unincorporated area of the SMSA (division, township, etc.). 05

Not within an SMSA, (within a county) and . . .

a small city (10,000 to 49,999) 06
a town or village (2,500 to 9,999) 07
an incorporated area less than 2,500 or
an unincorporated area of 1,000 to 2,499 08
open country within larger civil divisions,
e.g., township, division 09

C. Doctor's sex:

Female 1 55/
Male 2

D. Doctor's race:

White 1 56/
Black 2
Other 3

E. Time interview ended: _____ AM PM
57-58/ 59/

Date of interview: [ ][ ][ ][ ][ ][ ] 60-65/
Mo. Day Year

F. Date of interview:

G. Interviewer name: _____

Interviewer ID number: [ ][ ][ ][ ][ ] 66-70/

H. Signature: _____

1-4/

5-8/

Pediatrician Survey

Most of these questions can be answered by circling the number of the response which comes closest to your answer. For those, only **one** number should be circled. If none of the printed answers corresponds to your response, please write in your answer.

1 Primary specialty is: Pediatrics 01 9 10/

Other ⟶ A. What? _____

2 Subspecialty is: _____ 11 12/

None 01

The following questions refer to your main practice only. If you are involved in other activities besides patient care or have more than one practice, please answer only in terms of your main practice in which you see patients.

3 Location of **main practice**: **(circle one)** 13/

Office-Based 1

Not office-based: Clinic 2

Hospital 3

HMO 4

Other (please specify) 5

_____

4 Employment Status/Legal Arrangement of **Main Practice**: **(circle one)** 14 15/

Self-employed (unincorporated)

Solo 11

Group 12

(or)

Stockholder in professional medical corporation

Solo 21

Group 22

(or)

Salaried employee of

Another MD or group 31

Clinic or Hospital 32

HMO 33

Other (specify) _____ 34

5 How many other physicians are associated with you in your main practice? 16 17
(Enter number on each line)

None ☐ (or) _____
total number other physicians

A. How many are pediatricians? 18 19/
None ☐ (or) _____
total number other pediatricians

(1) How many work at least 20 hours a week for this practice? _____ 20 21.

(2) How many work less than 20 hours a week for this practice? _____ 22 23

B. How many are other kinds of physicians? 24 25
None ☐ (or) _____
total number non-pediatricians

(1) How many work at least 20 hours a week for this practice? _____ 26 27/

(2) How many work less than 20 hours a week for this practice? _____ 28 29/

6 Do you spend at least 20 hours per week in this practice? Yes 1 30/
No 2

7 Is any part of this practice prepaid? Yes . . . . . 1 A. What percent?_____% 31/
No 2 32-34/

8 Do you feel that your main practice is currently: 35/

At about capacity 1
Under capacity 2
Over capacity 3

9 Have you ever participated in your state's Medicaid program — that is, have you ever received payment from Medicaid in this state? 36/

Yes . . . . . 1 No 2

A. Do you now accept all Medicaid patients who contact you, only some, or none? 37/
(circle one)

All 1
Only some 2
None 3

B. How would you describe your current particpation in Medicaid? **(circle only one answer)** 38/

Accept Medicaid patients in an emergency only 1

Accept Medicaid patients for acute but not for preventive care 2

Accept only those Medicaid patients referred by another physician 3

Accept Medicaid patients up to a percentage of patient load 4

Other (Please describe)_____

_____ . . . 5

39 40.

10

About what percentage of your patients are covered by:

Blue Shield usual customary or reasonable (UCR) policies . . . . . _____% 41-43/

Medicaid . . . . . _____% 44-46/

Part B of Medicare . . . . . _____% 47-49/

Commercial insurance companies (Aetna, Travelers, etc.) . . . . . _____% 50-52/

What percent have no coverage by third party payers . . . . . _____% 53-55/

Please do not leave Question 10 blank. Enter your best guess on each line.

11

If you have any patients covered by Medicaid: (None of my patients is covered by Medicaid ☐. Skip Question.)

A. About what percent of the time is a Medicaid claim returned to your office for additional work? . . . . . _____% 56-58/

B. About how many weeks does it take Medicaid to make payment? . . . . . _____ weeks 59-60/

C. And about how many minutes does it take to fill out a claim for Medicaid? . . . . . _____ minutes 61-63/

D. Who **usually** fills out the claim? **(circle one)** 64/

Self or other physician 1
Nurse 2
Secretary/Receptionist/Clerk 3
Other (specify) _____ 4

12

A. What is your current usual fee for a well child office visit? . . . . . $_____ 65-67/

(1) If a patient is covered by Medicaid, how much do you expect to receive in payment?

$_____ (or) ☐ None of my patients is covered by Medicaid. 68-70/

B. What is your current usual fee for a routine medical follow-up visit in your office? . . . . . $_____ 71-73/

(1) If a patient is covered by Medicaid, how much do you expect to receive in payment? 74-76/

$_____ (or) ☐ None of my patients is covered by Medicaid.

80 1

13

Some people believe it is the responsibility of society through its government to ensure that medical care is available to those who cannot afford it.
Do you

Agree with that strongly	1	5
Agree somewhat	2	
Disagree somewhat	3	
or disagree strongly	4	

14

Following are some statements about which physicians have varying opinions. Please indicate your agreement or disagreement with each

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	
A. Seeing the same doctor over time is the best way of ensuring a child's good health	1	2	3	4	5	6
B. The City or County Health Department should be the principle source of medical care for low income children	1	2	3	4	5	7
C. Money spent on preventive child health care results in money saved in treating illness	1	2	3	4	5	8
D. The health problems of children at varying income levels are so different it is difficult to serve all their needs in one practice	1	2	3	4	5	9

15

Compared to 5 years ago has your patient load:

Increased	1	10
Decreased	2	
Stayed about the same	3	
Have been in practice less than five years	4	

16

Have you moved your office or added an office in the last five years?

Yes moved	1	11
Yes added	2	
Yes moved and added	3	
No neither	4	

17

In the past two years have these aspects of your practice changed? **(circle one number for each item)**

(In practice less than 2 years ☐. Skip question)

	Increased	Stayed the Same	Decreased	
Hours office is open have	1	2	3	12/
Number of house calls has	1	2	3	13/
Number of non-physician employees has	1	2	3	14/
Number of hospital or institutional visits has	1	2	3	15
Pre-paid portion of practice has	1	2	3	16
Number of Medicaid covered patients has	1	2	3	17/
Age range of patient load has	1	2	3	18/
Frequency with which children's office visits are covered by insurance has	1	2	3	19/

18

In the past two years have you:

(In practice less than 2 years ☐. Skip question)

A. Changed amount of time spent treating psycho-social problems of patients? 20/
- Increased . . . 1
- Stayed the same . . . 2
- Decreased . . . 3

B. Changed amount of time spent treating developmental and social problems of adolescents? 21/
- Increased . . . 1
- Stayed the same . . . 2
- Decreased . . . 3

C. Found that when you make referrals your patients are not as likely to return to you for their primary health care? 22/
- Yes . . . 1
- No . . . 2

D. Sought new patient referral sources? 23/
- Yes . . . 1
- No . . . 2

E. Used a marketing strategy or technique? 24/
- Yes . . . 1
- No . . . 2

19

Aside from patients whose care is paid for by Medicaid, are you currently accepting:

- All new patients who contact you . . . 1 25/
- Only some . . . 2
- No new patients . . . 3

20

Approximately what percentage of your patient load receives Medicaid benefits?

_____ % 26-28

21

How frequently do you treat patients who may be unable to pay their bills for your services, but are not covered either by a public or private health plan?

Always 1
Sometimes 2 } → A. When you treat these patients do you reduce or waive the fee to the patient 29/
Never 3

Always 1 30/
Sometimes 2
Never 3

B. Compared to 5 years ago has the number of patients you see for a reduced or waived fee:

Increased 1 31/
Stayed the same 2
Decreased 3
Have been in practice less than 5 years 4

C. Approximately what percent of your potential billings over the past year has been lost in reduced or waived fees?

_____ % 32-34

22

A. Are you currently experiencing competition in your practice from these sources of medical care? **(indicate yes or no for each item)**

	Yes	No	
a. Other pediatricians	1	2	35/
b. GPs/FPs	1	2	36/
c. Physicians other than above	1	2	37/
d. Health Maintenance Organizations (HMOs)	1	2	38/
e. Individual Practice Associations (IPAs)	1	2	39/
f. Preferred Provider Organizations (PPOs)	1	2	40/
g. Free standing emergi-centers	1	2	41/
h. Walk-in clinics	1	2	42/
i. Hospital outpatient depts.	1	2	43/
j. Nurse practitioners/physician assistants	1	2	44/
k. Other (specify) _____	1	2	45/

B. Which **one** of these presents the greatest competition to your practice now?

_____ (enter letter) 46-47/

C. Which **one** do you think will present the greatest competition to your practice five years from now?

_____ (enter letter) 48-49/

23

Following are some of the reasons why a doctor might decide against participation in Medicaid or decide to limit participation. **Whether or not you participate**, how important do you feel these factors are as reasons for not participating, or limiting participation, in Medicaid:

	Very important	Somewhat important	Not at all important	
A. Not all health care services are covered by Medicaid	1	2	3	50
B. It takes too long to complete the necessary paperwork	1	2	3	51
C. It takes too long to receive payment from Medicaid	1	2	3	52
D. Medicaid program regulations are too complex	1	2	3	53
E. Medicaid payments are too low	1	2	3	54
F. Medicaid payments are too unpredictable	1	2	3	55
G. Medicaid program regulations interfere with providing high-quality medical care	1	2	3	56
H. Problems such as broken appointments and language barriers make it difficult to treat Medicaid patients	1	2	3	57
I. The type of patient who is eligible for Medicaid	1	2	3	58
J. There are few Medicaid eligibles in this area	1	2	3	59

24

Some private insurance companies and Medicaid programs are introducing Case Management. This is an arrangement in which a primary care physician is responsible for full health care management of a patient providing 24 hour coverage and in which a patient needs a formal referral from the primary care physician in order to obtain any additional services

A. How would you feel about taking case management responsibilities for Medicaid patients?

I would be willing to do so . . . 1 60
I would not be willing to do so . . . 2
I am already doing so . . . 3

B. How would you feel about taking case management responsibilities for private patients?

I would be willing to do so . . . 1 61
I would not be willing to do so . . . 2
I am already doing so . . . 3

25

A. What is your attitude toward accepting prepayment for your services for Medicaid patients? 62/

I would be willing to do so 1
I would not be willing to do so 2
I am already doing so 3

B. What about private patients — What is your attitude toward accepting prepayment for your services for private patients? 63/

I would be willing to do so 1
I would not be willing to do so 2
I am already doing so 3

26

Pre-paid programs sometimes place the physician at risk for excessive patient care costs. There is also a potential for profit when costs are low.

A. What is your attitude toward providing services through such a risk-sharing program for Medicaid patients? 64/

I would be willing to do so 1
I would not be willing to do so 2
I am already doing so 3

B. What about for private patients? What is your attitude toward providing services through such a risk-sharing program for private patients? 65/

I would be willing to do so 1
I would not be willing to do so 2
I am already doing so 3 80/2

BegCd3
DUP 1–4

27

Another reimbursement arrangement offers certain benefits to the physician in exchange for a discounted fee-for-service.

What is your attitude toward entering into a contract which would give you assured full reimbursement, prompt payment, and access to new patients while you maintained your current patient load, for a reduction in your usual fee? 5/

I would be willing to do so 1
I would not be willing to do so 2
I am already doing so 3

28 A Are you familiar with the types of contracting arrangements listed below? (circle one number for each item)

	Yes	Somewhat	No	
a Preferred Provider Organization (PPO)	1	2	3	6
b Exclusive Provider Organization (EPO)	1	2	3	7
c Individual Practice Association (IPA)	1	2	3	8
d Primary Care Network (PCN)	1	2	3	9
e Multiple Employer Trust (MET)	1	2	3	10
f Health Maintenance Organization (HMO)	1	2	3	11

B Are you currently under contract with any of these arrangements? 12

Yes 1 → (1) Enter letters _____ 13-16
No 2
↓
(2) Are you considering any such arrangement for the future? 17

Yes 1 → (3) Enter letters _____ 18-21
No 2

29 Are you: Female 1 22
Male 2

30 Which of the following best describes your racial or ethnic identification? 23

Black 1
White 2
Hispanic 3
American Indian (Native American) 4
Oriental/Asian 5
Other (specify) _____ 6

31 Are you Board Certified? 24

Yes 1
No 2

32 A What is the zipcode of the main office where you see patients? [ ][ ][ ][ ][ ] 25-29

B Have you practiced in this same community during the past 12 months? Yes 1 30
No 2

C In what county is your main office located? _____ 31-35

[ ] 36-39

If you have been in practice 5 or more years, you have completed the questionnaire. The remaining questions are asked only of physicians who have been in practice less than 5 years. Thank you for your help. Please return the questionnaire in the stamped and addressed enveloped enclosed.

If you have been in practice less than 5 years, please answer questions 33–35

33

A. How important to you were the following factors in selecting your current practice arrangement?

	Very important	Somewhat important	Not at all important / Not a factor	
The number of hours per week I would have to be available	1	2	3	40
The security of a regular salary	1	2	3	41
Being my own boss	1	2	3	42
Opportunity to develop close doctor-patient relationship	1	2	3	43

B. Please enter below any other reasons that were important to you in selecting your practice arrangement 44 45

_____

34

A. When you decided to practice in this community, how important were the following factors in making that decision?

	Very important	Somewhat important	Not at all important / Not a factor	
Population size	1	2	3	46
Ethnic composition	1	2	3	47
Community income level	1	2	3	48
Presence of hospitals and other support facilities	1	2	3	49
Did residency or medical school here	1	2	3	50
The need for additional child health care physicians	1	2	3	51
Personal/familial ties to the community	1	2	3	52
Climate and other life style attractions	1	2	3	53
Spouse's preference	1	2	3	54

B. Please enter below any other reasons that were important to you in selecting this community 55 56

_____

35

How likely are you to be in the same practice five years from now? 57

Very likely 1
Somewhat likely 2
Not at all likely . . . . . 3 ⟶ A. What do you plan to be doing? _____ 58 59

_____ 80 3

Thank you for your help. Please return this questionnaire in the stamped and addressed envelope enclosed.

Marlene B. Simon
American Academy of Pediatrics
1801 Hinman Avenue
P.O. Box 1034
Evanston, Illinois 60204

APPENDIX B

An Analysis of Survey Ineligibility and Nonresponse

In order to be eligible for the survey, pediatricians had to be in private office-based practice, to be associated with 10 or fewer physicians, to be working full-time, and to have 20 percent or less prepaid practice. Physicians practicing under different conditions, e.g. in a large group or under a different payment mechanism, were assumed to make their Medicaid decisions under a different set of constraints and incentives; therefore, these physicians were excluded. In addition, respondents had to have practiced in the same community for at least the previous year, so that they would have had time to establish their practices.

In the first Medicaid study, NORC interviewers telephoned the physicians in the sample to confirm their eligibility for the survey. Telephone screening excluded 578 physicians from the sample, leaving 879, or 60.3 percent of the original sample, eligible for interviewing. Table B.1 displays reasons for survey ineligibility by state. The principal reason that physicians were excluded from the sample was that they were not in office-based practice: 36 percent of the original sample were excluded for this reason.

Table B.2 displays response rates by state for physicians eligible for the survey. Response rates ranged from a low of 86.9 percent in Colorado to a high of 98.3 percent in Oklahoma. A chi-square test indicated no significant differences in response rates by state. In addition, no significant differences were found by sex, place of medical educaiton, or age of the physician. There is some evidence that board-certified pediatricians were more likely to respond to the interview than non-board-certified pediatricians (93.8 percent as compared with 89.5 percent). Although the differences appear slight, the chi-square test is significant at the .04 level.

There was some concern that there might be differential Medicaid participation among physicians who would or would not participate in the survey. Of the 65 nonrespondents, 28 agreed to answer a question in the screening interview about their Medicaid participation. It was found that while 85.1 percent of the respondents treat Medicaid patients, only 75 percent of the nonrespondents do. However, the chi-square test indicated no statistically significant differences. Finally, among the respondents, the average doctor devotes 16.9 percent of his practice to Medicaid, while for the nonrespondents this proportion is 14.21 percent. According to a t-test, this difference is not significant. Thus, while only 43 percent of the nonrespondents were willing to answer a question about their Medicaid participation, it was possible to allay some doubts about differential Medicaid participation among respondents and nonrespondents.

Physicians were not screened for eligibility prior to the follow-up survey; instead, questionnaires returned were coded "in-scope" or "out-of-

scope" depending on physicians' responses to specific questionnaire items. In addition, during the telephone follow-up, nonresponding physicians were probed for some of the information required to determine eligibility for the survey, and those known to be ineligible were told they did not need to return their questionnaires.

Tables B.3 and B.4 display reasons for survey ineligibility by state for the panel and sample physicians, with a summary for panel and sample in Table B.5. Survey ineligibility varied by state, with several states (particularly Massachusetts and New York) having high proportions of both panel and sample physicians ineligible for the survey, and others (for instance, Georgia, Nebraska, and Texas) having relatively low proportions ineligible. Not surprisingly, as Table B.5 summarizes, reasons for survey ineligibility differ for panel and sample physicians: panel physicians were far more likely to be disqualified because they are retired or deceased or because they have too high a proportion prepaid, while more than half of the new M.D. sample physicians were excluded because they were not office-based. These differences are due in part to the fact that the new M.D. sample physicians have just entered practice, while the panel physicians tend to be older and better-established. In addition, many ineligible panel physicians were screened out five years ago during the first survey.

Overall, ineligibility reduced the sample from 1487 to 992 physicians, of whom 791 returned questionnaires, for a response rate of 79.7 percent; response rates for panel and sample were 83.7 and 71.9 percent respectively. Of the 201 refusals, 109 were known to be eligible for the survey, while the status of the 92 remaining physicians could not be confirmed.

Information about the nonrespondents is available from the AMA Masterfile as well as from follow-up phone calls. Therefore, it is possible to examine differences between respondents and nonrespondents. Some variation in response rates by age group, sex, place of medical school graduation, metropolitan and nonmetropolitan residence, state of residence, and reported Medicaid participation is evident (see Table B.6). However, chi-square tests showed that only the differences in Medicaid participation proved to be significant: Medicaid participants were more likely than nonparticipants to respond to the survey. This difference means that our estimate of Medicaid participation is about one percentage point higher than it is likely to have been if <u>all</u> physicians had responded to the survey.

Table B.1

Reasons for survey ineligibility, by state, 1978

Reason for survey ineligibility	State												
	CA	CO	GA	IN	IA	MD	MA	NE	NY	OK	PA	TN	TX
Total out-of-scope	68	58	20	41	39	53	47	14	54	55	53	39	37
Out-of-scope physicians as percent of total	52.3	48.7	16.3	32.5	50.6	43.4	41.2	31.1	47.4	48.2	43.8	31.0	29.4
Not full-time	2	2	0	0	0	3	2	0	6	4	4	2	1
Over 20% prepaid	14	12	0	1	1	7	5	0	4	0	9	0	2
More than 10 MDs in practice	8	11	0	18	12	0	4	5	1	12	2	3	6
Not office-based	23	20	7	7	15	19	14	4	22	19	30	15	13
Moved in past year	5	1	5	2	0	0	1	0	7	6	3	6	4
Not a pediatrician	7	7	3	4	2	1	6	1	2	9	4	2	6
Unable to locate	0	0	0	1	0	0	7	0	1	0	0	0	0
Retired or deceased	0	1	1	0	2	4	1	2	4	2	1	1	1
Moved out of state	3	0	1	0	2	2	1	1	3	1	0	5	1
Other	6	4	3	8	5	17	6	1	4	2	0	5	3

Table B.2

Response Rates by State, 1978

State	Response Rate
Total	92.6%
California	93.5
Colorado	86.9
Georgia	94.2
Indiana	90.6
Iowa	97.4
Maryland	92.8
Massachusetts	94.0
Nebraska	87.1
New York	90.0
Oklahoma	98.3
Pennsylvania	92.6
Tennessee	96.6
Texas	88.8

Table B.3

Reasons for survey ineligibility by state for panel physicians, 1983

Reasons for survey ineligibility	State												
	CA	CO	GA	IN	IA	MD	MA	NE	NY	OK	PA	TN	TX
Total out-of-scope	12	14	14	14	3	8	14	4	12	11	11	10	11
Out-of-scope physicians as percent of total	21.1	25.5	14.7	19.2	8.1	12.7	23.3	15.4	23.1	19.6	17.7	12.3	13.9
Not full-time	0	2	0	1	0	1	0	0	0	1	2	1	0
Over 20% prepaid	5	5	1	2	1	1	5	0	4	1	1	3	3
More than 10 MDs in practice	1	0	2	0	0	0	2	1	0	1	0	1	0
Not office-based	2	3	3	3	1	3	2	1	2	2	1	2	4
Moved in past year	0	1	1	0	0	0	0	0	1	0	1	0	0
Not a pediatrician	0	2	0	1	0	0	0	1	1	1	0	0	1
Unable to locate	0	0	1	2	0	0	1	0	0	0	0	0	0
Retired or deceased	4	1	5	4	1	2	4	1	3	4	6	2	3
Moved out of state	0	0	1	1	0	1	0	0	1	1	0	1	0

Table B.4

Reasons for survey ineligibility by state for sample physicians, 1983

Reasons for survey ineligibility	State												
	CA	CO	GA	IN	IA	MD	MA	NE	NY	OK	PA	TN	TX
Total out-of-scope	26	20	18	17	13	42	60	6	38	18	41	20	20
Out-of-scope physicians as percent of total	39.4	44.4	34.0	39.5	65.0	60.0	60.0	28.6	62.3	47.4	68.3	46.5	37.7
Not full-time	2	0	0	0	0	1	0	0	0	0	0	0	0
Over 20% prepaid	1	1	1	0	2	1	3	0	1	1	1	0	0
More than 10 MDs in practice	3	5	0	0	1	1	3	0	1	1	1	0	2
Not office-based	19	6	9	8	6	21	37	4	23	11	17	12	12
Moved in past year	0	3	3	5	4	8	6	1	3	2	11	2	3
Not a pediatrician	0	0	1	1	0	5	2	0	2	1	2	1	0
Unable to locate	0	4	4	2	0	3	5	1	8	1	4	3	0
Retired or deceased	0	0	0	0	0	1	0	0	0	0	0	0	0
Moved out of state	1	1	0	1	0	1	3	0	0	1	4	1	2

Table B.5

Reasons for survey ineligibility, panel and sample physicians, 1983

Reasons for survey ineligibility	Panel		Sample	
	Number	Percent	Number	Percent
Total out-of-scope	156		339	
Total physicians sampled	814		673	
Out-of-scope physicians as percent of total	19.16%		50.37%	
Not full-time	8	5.13%	3	0.88%
Over 20% prepaid	32	20.51	12	3.54
More than 10 MDs in practice	8	5.13	18	5.31
Not office-based	30	19.23	185	54.57
Moved in past year	4	2.56	51	15.04
Not a pediatrician	8	5.13	15	4.42
Unable to locate	4	2.56	35	10.32
Retired or deceased	40	25.64	1	0.29
Moved out of state	40a	14.10	15	4.42

aIncludes 18 physicians who were known to have moved out of state before the 1983 survey was conducted.

Table B.6

Response rates by various physician characteristics and chi-square tests of significance

Physician characteristic	Panel Response rate	Panel Significance	Sample Response rate	Sample Significance
Age Group				
< 35	78.6%	n.s.	71.0%	n.s.
35 - 49	80.8		75.9	
> 50	86.4		--	
Sex				
Male	84.7	n.s.	74.4	n.s.
Female	76.9		67.0	
Place of medical school graduation				
USMG	83.7	n.s.	71.6	n.s.
FMG	85.0		75.0	
Metropolitan practice				
Metropolitan	83.7	n.s.	70.6	n.s.
Nonmetropolitan	83.8		78.0	

Table B.6 (continued)

Response rates by various physician characteristics and chi-square tests of significance

Physician characteristic	Panel Response rate	Panel Significance	Sample Response rate	Sample Significance
State of residence				
California	71.1	n.s.	60.0	n.s.
Colorado	82.9		84.0	
Georgia	82.5		68.8	
Indiana	84.8		80.8	
Iowa	94.1		71.4	
Maryland	85.4		60.7	
Massachusetts	89.1		72.5	
Nebraska	77.3		73.3	
New York	82.5		87.0	
Oklahoma	93.3		75.0	
Pennsylvania	76.5		79.0	
Tennessee	88.7		78.3	
Texas	79.4		60.6	
Medicaid participation[a]				
Participant	89.6	$p<.05$	87.3	$p<.01$
Nonparticipant	83.0		68.8	

[a] This measure of Medicaid participation is based on percent of physicians who report accepting all or some Medicaid participants, rather than on reported percent of patient load covered by Medicaid, as in the remainder of the Report.

APPENDIX C

Technical Description of Variables in the Analysis

Table C.1 shows the independent and dependent variables used in the analysis along with the source(s) of data for each and, when necessary, a brief description of how each was defined.

The RMPI, or Revised Medicaid Program Index, will be discussed in detail here because of its greater complexity. The RMPI is an index of state Medicaid policy drawing on various secondary sources. As developed by Davidson (1978), it is designed to measure professional incentives which may foster or hinder Medicaid participation. Six different indicators of reimbursement, services, and eligibility policy and administrative efficiency compose the index. The value for each state is the sum of the components, shown in Table C.2. Each will be discussed briefly.

Reimbursement procedures (as distinct from payment levels) are expected to influence physicians' Medicaid decisions in that they restrict to a greater or lesser degree the physician's control over payments. Reimbursement procedures range from those which physicians consider to be quite restrictive (fee schedules set by the state program) to those over which physicians retain complete control (their own usual fees).

Limitations on coverage of services represents interference with professional medical or clinical judgment. The second component of the RMPI measures a state's coverage of optional services beyond the minimum required by federal regulations. The third reflects the imposition of limitations on amount, duration, and scope of services provided, and the requirement that the provider obtain authorization from Medicaid program staff before rendering a particular service.

Changes in Medicaid eligibility status are expected to discourage physicians' Medicaid participation because such changes may put in jeopardy the completion of a course of preventive or therapeutic services. These changes may also put in doubt reimbursement for services already rendered. Fluctuation in eligibility status cannot be measured directly, but it is assumed that the problems implied by unstable eligibility, including disruption of continuity of care and the threat of bad debts, would be more serious in states in which welfare eligibility levels were low relative to the poverty line. Generosity of state policies toward the medically needy is expected to affect fluctuations in eligibility and, thus, physician participation, in a similar way.

Finally, a state's use of a Medicaid Management Information Service (MMIS), a federally approved computerized claims processing system, is expected to foster Medicaid participation through the prompt and efficient handling of claims.

Table C.1

Variables in the analysis

Variable name	Description	Source	Discussion
Independent Variables			
AGE	Age	AMA Masterfile	
FMG	Place of medical graduation	AMA Masterfile	Place of medical school graduation recoded into United States medical graduate (USMG) and foreign medical graduate (FMG)
CERT	Board certification status	AMA Masterfile	
SOC	Agree/disagree on responsibility of society to ensure that medical care is available	Survey	
SALR	Nonphysician personnel costs	Federal Register and HCFA, personal communication	Index of hospital wages for SMSAs and nonmetropolitan counties, adjusted by the Area Price Deflator
INCR	Zip code area per capita income	1970 and 1980 Censuses	Per capita income for zip code area in which physician practices
MD	Active physicians per 100,000 county population, 1976 and 1981	Area Resource File	
MEDPOPR	Estimate of the proportion of zip code area population on Medicaid	1970 and 1980 Censuses; 1979 and 1984 Statistical Abstracts	Percent of zip code population below poverty divided by the percent of state population below poverty (Census year), divided by the percent of state population receiving Medicaid in the survey year, for area in which physician practices

Table C.1 (continued)

Variables in the analysis

Variable name	Description	Source	Discussion
METROR	Metropolitan and nonmetropolitan practice	1980 Census definition	
LNWKS	Elapsed weeks between billing and payment of Medicaid claims	Survey	Natural log of the number of weeks reported by the physician
FRATIO	Ratio of Medicaid payment to usual fees	Survey	Contextual variable for SMSA (if 3 or more physicians in SMSA) and state nonmetropolitan areas
RMPI	Revised Medicaid Program Index	Secondary sources (see text)	
Dependent Variables			
PARTIC	Medicaid participation	Survey	Based on physician's report of percent of patient load covered by Medicaid, coded "1" if reported percent is 1 percent or greater
EXTLOG	Extent of participation	Survey	Natural log of reported percent of patient load covered by Medicaid, coded for Medicaid participants only
FULLIM	Full vs. limited participation	Survey	Coded for Medicaid participants who accept all new non-Medicaid patients only, with those accepting all Medicaid patients coded "full participants", and those accepting only some coded "limited participants"

Table C.1 (continued)

Variables in the analysis

Variable name	Description	Source	Discussion
Other			
Area Price Deflator		Bureau of Labor Statistics	An index created for specific SMSAs and other metropolitan and nonmetropolitan areas by state, using BLS cost-of-living data, used to adjust for geographic variation in price

Table C.2

Components of the Revised Medicaid Program Index

Component	Coding procedures
Reimbursement procedures	Reimbursement procedure for each of 7 basic services is scored according to the following scale: Fee schedule = 0 Reasonable cost Maximum cost/unit time = 1 Percentage of charges Negotiated charge Reasonable charge Usual and customary charge with a maximum = 2 Usual and customary charge = 3 Scores for all seven procedures are summed, and the total is recoded to a number from 0 to 5.
Number of optional services	The number of optional services provided by each state is recoded to a number from 0 to 5.
Service limitations/ prior authorizations	Service limitations and prior authorization requirements for each of 7 basic services are scored according to the following: Limits and prior authorization = 0 Limits or prior authorization = 1 Neither limits nor prior authorization = 2 Scores for all seven procedures are summed, and the total is recoded to a number from 0 to 6.
AFDC payment standard divided by poverty line	The AFDC payment standard (or maximum payment) for a family of four is divided by the poverty line and recoded to a number from 1 to 5.
Medically Needy program	If the state has no medically needy program, this component is coded "0". If the state provides medically needy coverage and the medically needy protected income is less than or equal to the AFDC payment standard, it is coded "1". If the protected income level is greater than the AFDC payment standard, this component is coded "0".
Status of MMIS program	Coded "1" if the state has a Medicaid Management Information System (MMIS), and "0" if not.

APPENDIX D

Weighting the 1983 Data

Weights were assigned to the 1983 panel and "new physician sample" data to ensure that the data were representative of the age distribution in each state. American Medical Association figures on the age distribution of office-based pediatricians in each state were used in the following formulas:

$$W_p = \frac{N}{(R+1) \times N_p}$$

$$W_s = \frac{R \times N}{(R+1) \times N_s}$$

N = Total respondents

N_p = Total panel respondents

N_s = Total "new physician sample" respondents

R = Pediatricians in practice five years or less as a proportion of total office-based pediatricians in state

W_p = Weight for panel data

W_s = Weight for "new physician sample" data

The weights derived using these formulas are shown in Table D.1.

Table D.1

Weights for 1983 data

State	Panel	Sample
California	1.5072	.3237
Colorado	1.3431	.4445
Georgia	1.2450	.3159
Indiana	1.2462	.4139
Iowa	.9394	1.3277
Maryland	1.2300	.3642
Massachusetts	1.4849	.3145
Nebraska	1.3370	.4792
New York	1.4303	.2900
Oklahoma	1.0331	.9074
Pennsylvania	1.1360	.6463
Tennessee	1.1345	.5293
Texas	1.1610	.5652

APPENDIX E:

Summary Statistics for Multivariate Analyses

Means and standard deviations for physicians included in the cross-sectional participation, extent of participation, and full vs. limited analyses are reported in Tables E.1 - E.3.

Table E.1

Means and standard deviations, physicians in the participation analysis, 1978 and 1983

Variable	1978 Means	1978 Standard Deviation	1983 Means	1983 Standard Deviation
Age	48.03	11.21	50.18	12.25
Place of medical graduation	0.13	0.33	0.11	0.32
Board certification	0.73	0.44	0.80	0.40
Responsibility of society to ensure that medical care is available	0.82	0.39	0.82	0.38
Nonphysician personnel costs	880.29	105.28	1162.50	132.00
Zip code area per capita income	3780.20	1221.45	11014.56	3596.76
Physicians per 100,000 county population	182.98	120.48	218.65	144.12
Proportion of zip code area population on Medicaid	7.32	6.31	7.18	6.69
Metropolitan practice	0.86	0.35	0.87	0.33
Log of weeks for payment	--	--	--	--
Ratio of Medicaid reimbursement to usual fees	0.77	0.12	0.73	0.10
RMPI	16.86	2.54	17.69	2.21
N	784		768	

a The four nominal variables are coded as dummy variables assuming the value of one, respectively, if the physician is a graduate of a foreign medical school, board-certified, agrees with the attitudinal statement, and practices in a metropolitan community.

Table E.2

Means and standard deviations, physicians in the extent of participation analysis, 1978 and 1983

Variable	1978 Means[a]	1978 Standard Deviation	1983 Means	1983 Standard Deviation
Age	47.39	11.13	49.47	12.01
Place of medical graduation	0.14	0.35	0.13	0.33
Board certification	0.73	0.44	0.83	0.38
Responsibility of society to ensure that medical care is available	0.84	0.37	0.85	0.36
Nonphysician personnel costs	880.47	110.21	1163.20	139.61
Zip code area per capita income	3714.19	1123.38	10807.39	3412.74
Physicians per 100,000 county population	177.44	114.91	208.45	138.08
Proportion of zip code area population on Medicaid	7.59	6.55	7.39	6.79
Metropolitan practice	0.85	0.36	0.86	0.35
Log of weeks for payment	1.82	0.56	1.69	0.56
Ratio of Medicaid reimbursement to usual fees	0.77	0.12	0.74	0.10
RMPI	17.12	2.54	17.94	2.02
N	646		591	

a The four nominal variables are coded as dummy variables assuming the value of one, respectively, if the physician is a graduate of a foreign medical school, board-certified, agrees with the attitudinal statement, and practices in a metropolitan community.

Table E.3

Means and standard deviations, physicians in the full and limited participation analysis, 1978 and 1983

	1978		1983	
Variable	Means	Standard Deviation	Means	Standard Deviation
Age	47.02	11.37	49.15	11.97
Place of medical graduation	0.16	0.37	0.14	0.34
Board certification	0.73	0.44	0.82	0.38
Responsibility of society to ensure that medical care is available	0.85	0.36	0.83	0.38
Nonphysician personnel costs	877.62	109.10	1160.42	139.48
Zip code area per capita income	3678.82	1114.59	10668.65	3334.33
Physicians per 100,000 county population	174.68	116.00	207.86	142.59
Proportion of zip code area population on Medicaid	7.89	6.13	7.60	6.85
Metropolitan practice	0.83	0.38	0.85	0.35
Log of weeks for payment	1.82	0.55	1.69	0.55
Ratio of Medicaid reimbursement to usual fees	0.76	0.12	0.74	0.10
RMPI	17.33	2.60	17.98	1.99
N	440		591	

a The four nominal variables are coded as dummy variables assuming the value of one, respectively, if the physician is a graduate of a foreign medical school, board-certified, agrees with the attitudinal statement, and practices in a metropolitan community.

APPENDIX F:

State Medicaid Programs

Eligibility

State AFDC and Medicaid regulations have an important influence on what proportion of the state's poor children will be eligible for Medicaid benefits. Medicaid programs are required to cover all AFDC recipients, but the eligibility rules for AFDC programs can vary a great deal from state to state. The maximum payment, or "payment standard", effectively determines financial eligibility for AFDC. Federal regulations require certain types of families to be eligible for AFDC -- all states cover families with dependent children in which at least one parent is deceased, missing, or incapacitated. In addition, states may choose to cover families in which the principal wage-earner is unemployed under the optional AFDC-UP program. At state option, AFDC programs may also provide coverage for first-time pregnant women beginning in the sixth month of pregnancy.

Virtually all Medicaid programs supplement their coverage of AFDC and SSI recipients with eligibility for low-income individuals and families not receiving cash transfers. For children, the most important option is coverage of all financially eligible children under 21 who are not otherwise eligible for Medicaid, or "Ribicoff children", after the Congressman who lobbied for this coverage. This provision entitles children in low-income two-parent families to Medicaid coverage. Financial eligibility depends upon the state's AFDC standards.

Also potentially important for children are medically needy programs, under which categorically eligible families with incomes slightly above with AFDC income limit or with high medical expenses may receive Medicaid. If a state chooses to have a medically needy program, it sets a medically needy protected income level between 100% and 133% of its AFDC payment standard. Families with incomes lower than the income limit after deducting medical expenses, or "spending down", are eligible for Medicaid.

Recent federal legislation (discussed in Chapter 1) has had an impact on AFDC and Medicaid eligibility. As discussed earlier, OBRA restricted AFDC eligibility by capping gross income, limiting income disregards, and mandating other changes in AFDC regulations. Nationally, welfare rolls were cut in the first six months after passage of OBRA, but the impact varied a great deal from state to state because of differing economic conditions, timing of implementation, and regulatory context. It also gave states more flexibility in Medicaid coverage of children 18-20 years of age, although not many states took advantage of this option.

The Deficit Reduction Act, on the other hand, expanded eligibility by mandating Medicaid coverage of certain low-income pregnant women and children, by requiring automatic eligibility for newborn children of eligible mothers, and by rescinding some of the AFDC provisions passed under OBRA.

Services

States are required to cover eight basic services for categorically needy Medicaid recipients:

1. inpatient hospital services (other than services in an institution for tuberculosis or mental illness),

2. outpatient hospital services and rural health clinics,

3. lab and x-ray services,

4. skilled nursing facilities,

5. physicians' services,

6. early and periodic screening, diagnosis, and treatment for recipients under age 21,

7. family planning services and supplies for individuals of childbearing age, and

8. home health services.

In addition, states may cover a variety of optional services. Virtually all cover clinic services, emergency room, prescribed drugs, and intermediate care facilities, for example, while fewer programs cover private-duty nursing, Christian Science sanatoria, or nursing homes for patients ages 65 or over in TB institutions.

Reimbursement

States have two basic alternatives for physician reimbursement: (1) reasonable, customary, and prevailing charges or (2) a fee schedule. Level of payment is affected by reimbursement method as well as by decisions about type of fee schedule, frequency of fee schedule updates, the formula for calculating reasonable, customary, and prevailing charges, use of geographic differentials, and so on.

Until 1981, states were required to reimburse hospitals on the basis of reasonable cost, with the exception of certain states that had obtained waivers to use alternative methods. With the new regulatory flexibility provided by OBRA, more states are experimenting with rate-setting for hospital services.

For lab and x-ray services and for drugs, states are free to choose their own reimbursement methods as long as payments do not exceed Medicare payments. In addition, payments for prescription drugs cannot exceed federally-set limits known as the maximum allowable cost (MAC) plus a reasonable dispensing fee, the state's estimated acquisition costs (EAC) plus a reasonable dispensing fee, or the provider's usual and customary charge, whichever is lowest.

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